EDISON

Edison Healthcare Insight

July 2019

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The Edison healthcare team

www.edisongroup.com

Maxim Jacobs

Max joined Edisonôs 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.

Dr Nathaniel Calloway

Nathaniel Calloway joined the healthcare team in December 2015. Before Edison, he performed healthcare investment research for a fund at Bishop Rosen and for Wainscott Capital Partners. Prior to his role as an analyst he performed molecular neuroscience research at Cornell Medical School and holds a PhD in chemistry from Cornell. He has published eight scientific papers on topics ranging from physical chemistry to immunology, and he has been recognised as an American Heart Association fellow and an American Chemical Society Medicinal Chemistry fellow.

Pooya Hemami

Pooya is a licensed optometrist with over five years of experience in life sciences equity research. Prior to joining Edison, he covered the Canadian healthcare sector as a research analyst at Desjardins Capital Markets. He 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 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.

Sean Conroy

Sean joined Edisonôs healthcare team in September 2018. Previously, he worked at Charles River Laboratories performing drug discovery services. He holds a PhD in Medicinal Chemistry from the University of Nottingham.

Dr Dennis Hulme

Dennis joined Edison in December 2014. Prior to this he worked as an analyst at BBY Stockbrokers and as a research scientist at CSIRO. Dennis was ranked number two healthcare stock picker in the 2010 Starmine Analyst Awards and has a PhD in veterinary sciences.

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.

Dr Susie Jana

Susie joined the team in September 2015 and has 16 yearsôexperience 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 Soci®t® G®n®rale. Most recently she worked as a buy-side analyst, covering European biotech, pharma and medtech stocks at F&C Investments for five years.

Dr Andy Smith

Andy joined the Healthcare team at Edison in November 2017 after a period as a senior principal in ICONôs Pricing & Market Access consultancy. Prior to ICON he was chief investment officer at Mann Bioinvest and managed healthcare and biotech funds at AXA Framlington, SV Life Sciences, Schroders and 3i Group. Andy is a scientist by training and completed his PhD with Glaxochem after working for ICI and in the NHS. Between working as a lecturer at Guyôs Medical School, he worked in R&D management at SmithKline Beecham, before moving to the Strategic Product Development group in SB Pharmaceuticals to be a global product manager. Andy also has an MBA from the University of Greenwich and teaches the finance module on the Masterôs in Bioscience Enterprise course at the University of Cambridge.

Dr Daniel Wilkinson

Daniel joined Edisonôs Healthcare team in January 2016. He spent four years at Imperial College London, where he undertook both a Masterôs in Chemical Biology of Health & Disease and a PhD in Biosensors and Biotechnology in Diabetes. Before this he worked at eTect, a spin-out company from the University of Leeds that was focused on biosensor technology. He is currently studying for the Investment Management Certificate (IMC).

Alice Nettleton

Alice joined Edisonôs Healthcare team in November 2017. Previously, she worked as a business analyst at PharmaVentures on a variety of consulting projects relating to life science transactions. Alice holds a BSc in Biomedical Sciences from Kingôs College London and an MSc in Business Creation and Innovation in Biomedicine from Gothenburg University, and while studying has completed two internships at IP Pragmatics.

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Prices at 12 July 2019

Published 18 July 2019

Welcome to the July edition of the Edison Healthcare Insight. In this edition we have profiled 63 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. Edison is authorised and regulated by the Financial Conduct Authority. Edison is a registered investment adviser regulated by the state of New York.

We welcome any comments/suggestions our readers may have.

Neil Shah & Maxim Jacobs

Healthcare Research

Company profiles

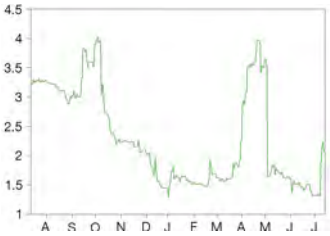
Prices at 12 July

US$/£ exchange rate: 0.7979
€/£ exchange rate: 0.8987
C$/£ exchange rate: 0.6108
A$/£ exchange rate: 0.5565
NZ$/£ exchange rate: 0.5318
SEK/£ exchange rate: 0.0850
DKK/£ exchange rate: 0.1204
NOK/£ exchange rate: 0.0933
JPY/£ exchange rate: 0.0074
NIS/£ exchange rate: 0.2200
CHF/£ exchange rate: 0.8077

Sector: Pharma & healthcare

Price:	€2.09
Market cap:	€111m
Market	Euronext Brussels

Share price graph (€)



Company description

Acacia Pharma is a hospital pharmaceutical company focused on the development and commercialisation of new nausea and vomiting treatments for surgical and cancer patients. Its main product, BARHEMSYS, is for the treatment of PONV and is forecast to launch in 2019.

Price performance

%	1m	3m	12m
Actual	38.6	(41.0)	(35.1)
Relative*	35.6	(36.7)	(31.0)

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Acacia Pharma (ACPH)

INVESTMENT SUMMARY

Acacia Pharma is focused on bringing antiemetic drugs to the US hospital setting for unmet needs in post-operative nausea and vomiting (PONV) and chemotherapy-induced nausea and vomiting. Acacia's lead product BARHEMSYS (repurposed amisulpride for the management of PONV) received a second complete response letter (CRL) in May 2019 from the US FDA following receipt of the first CRL in October 2018, both relating to deficiencies at the contract manufacturer. Acacia is qualifying an alternative supplier of amisulpride and is expected to resubmit an NDA in Q319. At 31 December, Acacia had net cash of £22.1m.

INDUSTRY OUTLOOK

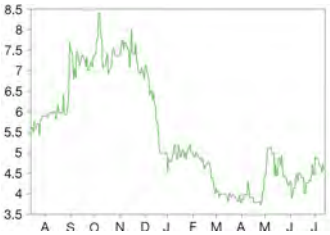
Inadequately treated PONV leads to prolonged stays in post-anaesthesia care unit recovery rooms. Use of BARHEMSYS could reduce patient hospitalisation time and the associated costs.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2017	0.0	(3.0)	(6.5)	(2.32)	N/A	N/A
2018	0.0	(15.0)	(16.2)	(0.35)	N/A	N/A
2019e	0.0	(14.6)	(16.8)	(0.30)	N/A	N/A
2020e	1.1	(45.6)	(48.3)	(0.88)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK4.60
Market cap:	SEK106m
Market	NASDAQ OMX First North

Share price graph (SEK)



Company description

Acarix, a Swedish company, sells the CE-marked CADScor to enable about half of chest-pain patients with suspected coronary artery disease to be ruled out from further, expensive testing.

Price performance

%	1m	3m	12m
Actual	2.2	18.0	(22.8)
Relative*	(0.3)	16.1	(28.5)

* % Relative to local index

Analyst

Dr John Savin

Acarix (ACARIX)

INVESTMENT SUMMARY

Acarix is in a market development phase. The application for German public reimbursement is underway. Acarix is focused on the German private market (about 10% of the population) plus public sector sales in Scandinavia. The significant long-term sales potential remains unaltered but we have adjusted our 2019 and 2020 forecasts for longer market development times.

INDUSTRY OUTLOOK

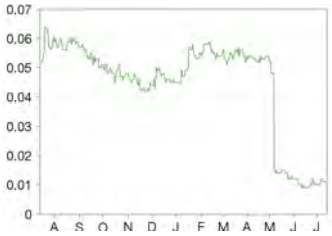
The CADScor medical device helps doctors rule out coronary artery disease so avoids complex and costly further testing in 50% of cases. It has been recognised by the UK NICE clinical technology evaluation system and has positive feedback from private German users. A strategic alliance with MED will help sales in Germany. The Dan-NICAD II study evaluates the test in patients aged 30–39 with suspected stable coronary artery disease to aid key opinion leader acceptance of CADScor. The Seismo study explores the use of CADScor for the early diagnosis of heart failure. A US trial and sales are crucial for value development.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.6	(29.5)	(30.7)	(129.31)	N/A	N/A
2018	1.0	(41.0)	(42.3)	(183.48)	N/A	N/A
2019e	2.6	(42.0)	(43.3)	(188.18)	N/A	N/A
2020e	4.1	(43.3)	(44.7)	(194.33)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.01
Market cap:	A$12m
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 and metabolic diseases.

Price performance

%	1m	3m	12m
Actual	10.0	(78.8)	(78.8)
Relative*	7.4	(80.2)	(80.2)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Actinogen Medical (ACW)

INVESTMENT SUMMARY

Actinogen announced in May 2019 the initial results from its Phase II clinical trial of Xanamem in patients with mild dementia due to Alzheimer's disease (AD). The safety of the drug was confirmed and the data showed Xanamem was inhibiting cortisol production, as demonstrated by the expected increase in adrenocorticotropic hormone. However, the 10mg dose of Xanamem was not effective in demonstrating statistical significance on any of the efficacy endpoints. Actinogen indicated it will analyse the data and make a decision on future steps once all analyses are complete and once the results from other supporting trials are available. Specifically, the company indicated that a higher dose and/or longer treatment could potentially be a way forward, given the drug appears safe and pharmacologically active. Our forecasts and valuation are under review.

INDUSTRY OUTLOOK

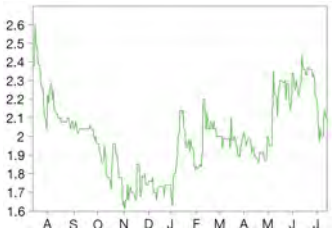
The unmet need in AD is vast and the size of the market has attracted interest from almost every player in CNS drug R&D over the past 30 years with very limited success so far. With so many late-stage failures, we believe, that 'non-mainstream' technologies, like Xanamem, may attract renewed interest from potential partners.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2017	1.3	(3.0)	(2.8)	(0.5)	N/A	N/A
2018	3.3	(6.0)	(5.9)	(0.8)	N/A	N/A
2019e	N/A	N/A	N/A	N/A	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.10
Market cap:	€83m
Market	MAB

Share price graph (€)



Company description

Based in Spain, ADL Bionatur Solutions provides contract manufacturing of fermentation-based biochem products and antibiotics, and develops and licenses its own portfolio of OTC and prescription animal health products, including probiotics and vaccines.

Price performance

%	1m	3m	12m
Actual	(13.9)	11.1	(16.0)
Relative*	(14.4)	13.2	(11.7)

* % Relative to local index

Analyst

Pooya Hemami

ADL Bionatur Solutions (BNT)

INVESTMENT SUMMARY

ADL Bionatur Solutions (ADL-BS) provides contract manufacturing (CMO) of fermentation-based products and services focused on the health, beauty and wellness sectors. It has established CMO/API (active pharmaceutical ingredient) business lines and its own proprietary development line of novel or innovative products. ADL will have 2,400m3 of total fermentation capacity available by mid-2019. While this operated at c 40% utilisation in much of 2018, given recent contract wins and the ramping up in 2019 of its two largest contracts (a six-year €146m flucosil-lactose deal and an arrangement with Amyris), ADL expects to have 100% of capacity committed by year end 2019. This should drive it to firmly positive company-wide EBITDA and profitability in 2019.

INDUSTRY OUTLOOK

We estimate the ADL unit's solid pipeline of existing CMO contracts will contribute to company-wide generation of at least €60m in 2019 revenue (vs €25m in 2018). We measure ADL 2018 net debt at approximately €40.6m, including a €7.0m loan from its majority shareholder.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2017	12.8	(10.4)	(12.7)	(251.65)	N/A	N/A
2018	25.3	(12.5)	(16.3)	(43.16)	N/A	N/A
2019e	60.8	6.1	1.8	4.53	46.4	N/A
2020e	73.5	11.2	6.2	15.82	13.3	8.3

Sector: Pharma & healthcare

Price:	NZ$3.19
Market cap:	NZ$310m
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 drugs to treat a range of conditions and a proprietary nebuliser.

Price performance

%	1m	3m	12m
Actual	6.3	82.3	32.4
Relative*	1.6	67.3	15.0

* % 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 salesforce in New Zealand, Australia and South-East Asia, and has been expanding its geographic footprint. Maxigesic, its combination acetaminophen/ibuprofen product addressing a $10.4bn market, is sold and launched in 20 countries with distribution agreements in place in over 125. Additionally, AFT is expecting its first approval for Maxigesic IV (which is licensed in 68 countries) in FY20 with a filing in the US expected in H120. AFT recently out-licensed Pascomer, a drug for facial angiofibromas in tuberous sclerosis complex, an orphan indication. Clinical trials are expected to start this year with results in 2020.

INDUSTRY OUTLOOK

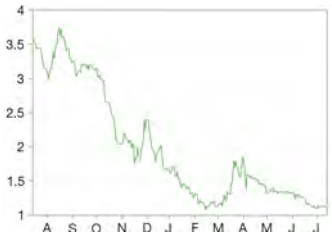
AFT is a multi-product company targeting pharmacy prescription, OTC and hospital markets. Data for Maxigesic offer them a competitive advantage in a fragmented industry.

Y/E Mar	Revenue (NZ$m)	EBITDA (NZ$m)	PBT (NZ$m)	EPS (c)	P/E (x)	P/CF (x)
2018	81.2	(10.5)	(12.9)	(13.30)	N/A	N/A
2019	85.1	5.8	(2.5)	(2.70)	N/A	32.3
2020e	99.9	10.3	6.4	6.58	48.5	35.6
2021e	119.5	21.4	17.6	18.05	17.7	16.2

Sector: Pharma & healthcare

Price:	€1.12
Market cap:	€23m
Market	Euronext Brussels

Share price graph (€)



Company description

ASIT biotech is a clinical-stage company focused on developing therapies for allergies. It uses its proprietary ASIT+ technology platform to develop products containing highly purified allergen fragments in an adjuvant-free formulation, selected to be safe while maintaining the capacity to stimulate the immune system.

Price performance

%	1m	3m	12m
Actual	(10.5)	(26.9)	(68.6)
Relative*	(12.5)	(21.4)	(66.7)

* % Relative to local index

Analyst

Andy Smith

ASIT biotech (ASIT)

INVESTMENT SUMMARY

ASIT biotech's ASIT+ short-course allergy immunotherapy (AIT) platform has generated a Phase III drug for the prevention of grass pollen allergy. Its earlier-stage programmes in house dust mite (hdm-ASIT+) and peanut allergies (pnt-ASIT+) will be developed via partnering. Unlike most other AITs (subcutaneous or sublingual), ASIT's products only require four injections before the allergy season. The second Phase III study for gp-ASIT+ is underway and results are expected after the pollen season of 2019. We expect ASIT biotech to self-market gp-ASIT+ in Europe and out-license all other rights ex-Europe. In July, ASIT is expected to complete its recently announced private placement that fully funds its clinical programs until Q320.

INDUSTRY OUTLOOK

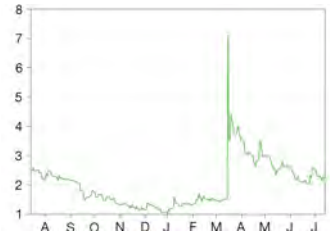
Although grass pollen and house dust mite allergies are not life-threatening in most cases, they result in a significant symptom burden for affected patients. With a safe and effective short-course pre-seasonal regimen, ASIT could expect some usage in patients accepting immunotherapy and the 50% of patients who refuse the existing almost year-round immunotherapy.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(12.0)	(12.0)	(93.6)	N/A	N/A
2018	0.0	(12.8)	(14.3)	(85.7)	N/A	N/A
2019e	0.0	(9.9)	(9.7)	(48.1)	N/A	N/A
2020e	0.0	(5.3)	(5.5)	(19.1)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.12
Market cap:	US$19m
Market	NASDAQ

Share price graph (US$)



Company description

Based in Seattle, WA, Atossa Genetics is focused on the development of locally administered pharmaceuticals for the treatment of pre-cancer and early-stage breast cancer. Lead candidate afimoxigene topical gel is expected to start a Phase II study in 2016 in breast hyperplasia or DCIS.

Price performance

%	1m	3m	12m
Actual	(1.4)	(28.9)	(17.8)
Relative*	(5.8)	(31.4)	(23.7)

* % Relative to local index

Analyst

Pooya Hemami

Atossa Genetics (ATOS)

INVESTMENT SUMMARY

Atossa is advancing endoxifen, a metabolite of tamoxifen, as a topical treatment for high mammographic breast density (MBD), a condition associated with higher cancer risk and gynecomastia. Atossa is also developing an oral endoxifen formulation to reduce cancer cell activity in the window of opportunity (WOO) between breast cancer diagnosis and surgery, and in women refractory to tamoxifen. It previously reported positive Phase I data for both formulations.

INDUSTRY OUTLOOK

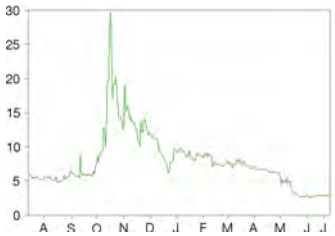
Atossa reported positive data for its 90-patient Phase II MBD study on topical endoxifen, as MBD was reduced by an average of 14.3% in the 20mg daily group (p = 0.02), although 72 patients developed skin rashes/irritation and did not complete a full six months of dosing. Atossa may advance this formulation for short-term use. The firm also is advancing a Phase II trial for oral endoxifen (WOO study). Atossa reported $19.7m net cash at March 31 2019, and we believe these funds can sustain operations into 2021.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(7.1)	(7.2)	(1000.81)	N/A	N/A
2018	0.0	(11.4)	(11.4)	(551.10)	N/A	N/A
2019e	0.0	(11.8)	(11.6)	(127.54)	N/A	N/A
2020e	0.0	(7.1)	(7.0)	(76.82)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.69
Market cap:	US$5m
Market	NASDAQ

Share price graph (US$)



Company description

Auris Medical is a Swiss biopharmaceutical company developing neurotology therapeutics. The company is developing intranasal betahistine in a Phase I trial for mental disorder supportive care and is entering Phase II for vertigo; both are designed to demonstrate proof-of-concept.

Price performance

%	1m	3m	12m
Actual	(7.9)	(59.9)	(76.0)
Relative*	(12.0)	(61.3)	(77.7)

* % Relative to local index

Analyst

Maxim Jacobs

Auris Medical Holding (EARS)

INVESTMENT SUMMARY

Auris Medical is a clinical-stage biopharmaceutical company developing pharmacotherapies for neurologic disorders of the inner ear. The company's primary focus is on the development of AM-125 (intranasal betahistine) for the treatment of acute vertigo. Oral betahistine dihydrochloride has been prescribed in Europe for decades for all types of vertigo, with an average 26% market share, but is not available in the US. Auris is in the process of initiating its Phase II clinical trial in 138 patients with surgically induced acute vertigo, with interim data expected in Q419. Auris is also developing AM-201, an intranasal betahistine formulation in Phase Ib, for co-administration with olanzapine to counteract adverse effects, especially weight gain. That trial is fully enrolled, with top-line data expected around the end of Q319.

INDUSTRY OUTLOOK

Acute vertigo/dizziness is one of the most common causes of visits to the emergency room with roughly 2.6m visits associated with the condition each year.

Y/E Dec	Revenue (CHFm)	EBITDA (CHFm)	PBT (CHFm)	EPS (CHFc)	P/E (x)	P/CF (x)
2017	0.0	(24.5)	(25.9)	(1072.0)	N/A	N/A
2018	0.0	(11.0)	(12.0)	(1533.0)	N/A	N/A
2019e	0.0	(11.3)	(11.3)	(256.0)	N/A	N/A
2020e	0.0	(16.5)	(17.2)	(375.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.77
Market cap:	US$110m
Market	CSE

Share price graph (US$)

Company description

Australis Capital is a company focused on US cannabis assets. It is acquiring a range of low-valuation cannabis assets that it believes will have staying power in the rapidly developing cannabis market, and has the goal of forming them into a fully operational and integrated US cannabis business.

Price performance

%	1m	3m	12m
Actual	(1.9)	4.0	N/A
Relative*	(6.2)	0.3	N/A

* % Relative to local index

Analyst

Dr Nathaniel Calloway

Australis Capital (AUSA)

INVESTMENT SUMMARY

Australis is in the process of building itself into a fully operational provider of medical and recreational cannabis. Its strategy is to acquire assets such and brands and technology that differentiate it from other players in the space. The recent agreement to acquire Green Therapeutics and to expand its growing operation should provide the production capacity for these brands and establish the company as a cannabis grower in the state of Nevada.

INDUSTRY OUTLOOK

The US cannabis industry is expected to grow at a more than 20% annual growth rate in the coming years as more states legalize recreational cannabis and the infrastructure is build in those states that have already legalized it. Moreover, US federal legalization may be a near-term inflection point for the industry, allowing operations to cross state lines and access to traditional sources of capital.

Y/E Mar	Revenue (C$m)	EBITDA (C$m)	PBT (C$m)	EPS (c)	P/E (x)	P/CF (x)
2017	N/A	N/A	N/A	N/A	N/A	N/A
2018	N/A	N/A	N/A	N/A	N/A	54.7
2019e	0.3	(3.2)	(5.1)	(2.34)	N/A	N/A
2020e	0.5	(3.3)	(3.4)	(2.29)	N/A	N/A

Sector: Pharma & healthcare

Price:	27.0p
Market cap:	£31m
Market	AIM

Share price graph (p)

Company description

Avacta is focused on the development of its Affimer technology for use in therapeutic and diagnostic/reagent applications. Assets include AVA004 (PD-L1), AVA021 (PD-L1/LAG-3) and AVA004/100 (PD-L1/I-DASH).

Price performance

%	1m	3m	12m
Actual	(11.5)	(15.6)	0.0
Relative*	(13.0)	(16.1)	2.7

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Avacta Group (AVCT)

INVESTMENT SUMMARY

Avacta is developing its proprietary Affimer platform in therapeutic and diagnostic applications. Affimers have many of the epitope-binding characteristics of antibodies, but with a much smaller molecular size (and cost of goods). In addition, Affimers can be modified as bispecifics, drug-antibody conjugates (DACs) or half-life extenders, or combinations thereof. Avacta's first Affimer product to go into into the clinic towards the end of 2020 is AVA004, an anti-PD1-L1 Affimer that is expected to prove safety and efficacy principles for Affimers that contain AVA004 as a component, such as the bispecific PD-L1/LAG3 Affimer, AVA021. Avacta has collaborations with LG Chem and Moderna, while the animal health and diagnostic applications of Affimers provide incremental revenues.

INDUSTRY OUTLOOK

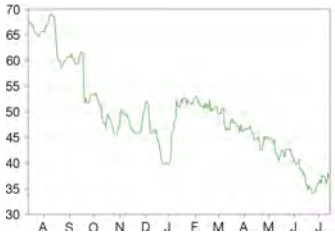
The rise of biosimilar drugs, in Europe at least, has highlighted the need for new biological drugs by companies that previously developed protein drugs like monoclonal antibodies. These potential partners, as well as those which already have a branded antibody product, would be keen adopters of the Affimer technology that gives them second-generation bispecifics and DACs.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (fd) (p)	P/E (x)	P/CF (x)
2017	2.7	N/A	(7.9)	(9.8)	N/A	N/A
2018	2.8	N/A	(10.4)	(13.5)	N/A	N/A
2019e	3.2	N/A	(12.3)	(9.0)	N/A	N/A
2020e	5.2	N/A	(12.4)	(9.0)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF36.68
Market cap: CHF436m
Market Swiss Stock Exchange

Share price graph (CHF)



Company description

Basilea focuses on anti-infectives and oncology. Lead products are Cresemba (an antifungal), which is approved in the US and Europe, and Zevtera (an anti-MRSA broad-spectrum antibiotic), approved in many European and non-European countries for pneumonia.

Price performance

%	1m	3m	12m
Actual	(3.3)	(17.6)	(45.1)
Relative*	(2.3)	(20.0)	(50.4)

* % 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 which should drive top-line growth: including Pfizer, which markets Cresemba in Europe (ex Nordics) and other territories, and Astellas, which markets Cresemba in the US. Phase III registration trials in the US are ongoing for Zevtera in ABSSSI (top line H219) and in SAB (top line H221), both are required for a US FDA submission. Basilea's oncology pipeline is spearheaded by in-licensed asset derazantinib (pan-FGFR inhibitor), which is in a Phase II registration study (FIDES-01) for intrahepatic cholangiocarcinoma that recently enrolled the first patient into an additional cohort of the study. A Phase I/II study for derazantinib in patients with advanced urothelial cancer is expected to initiate mid-2019, using both a monotherapy and combination approach with Roche's PD-L1 antibody atezolizumab (Tecentriq).

INDUSTRY OUTLOOK

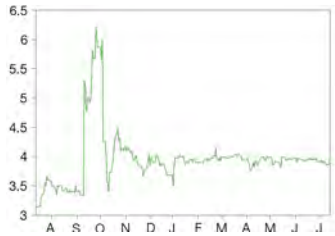
There is an ever-increasing need for therapeutic agents that are efficacious against drug-resistant strains of bacteria (eg MRSA), fungus or cancer. Hence, the opportunities for Zevtera, Cresemba and Basilea's oncology pipeline could be significant.

Y/E Dec	Revenue (CHFm)	EBITDA (CHFm)	PBT (CHFm)	EPS (CHFc)	P/E (x)	P/CF (x)
2017	101.5	(15.2)	(18.9)	(178.36)	N/A	20.8
2018	132.6	(22.3)	(31.0)	(289.19)	N/A	N/A
2019e	134.4	(24.1)	(31.9)	(295.28)	N/A	N/A
2020e	149.5	3.2	(4.8)	(44.64)	N/A	N/A

Sector: Pharma & healthcare

Price: DKK3.97
Market cap: DKK694m
Market NASDAQ OMX (CPH)

Share price graph (DKK)



Company description

BioPorto is a diagnostic company focused on the development and marketing antibodies and other products for research and diagnostics. This includes products marketed for research use and The NGAL Test for the prediction of kidney failure.

Price performance

%	1m	3m	12m
Actual	1.4	2.6	28.7
Relative*	4.1	4.9	30.5

* % Relative to local index

Analyst

Dr Nathaniel Calloway

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 test for children in urine is completed and a 510(k) was submitted to the FDA for approval mid-May. FDA has granted Breakthrough designation and ruling expected in August. For adults in plasma the pivotal clinical trial is currently being completed. 510(k) to be submitted to the FDA for approval in 2019. The NGAL test is commercially available for research purposes in the US 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)
2017	25.2	(33.1)	(34.2)	(20.59)	N/A	N/A
2018	26.0	(42.1)	(42.5)	(24.34)	N/A	N/A
2019e	38.6	(42.7)	(42.7)	(22.01)	N/A	N/A
2020e	53.7	(48.3)	(48.5)	(23.83)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK31.10
Market cap:	SEK1611m
Market	OMX

Share price graph (SEK)

Company description

BONESUPPORT is an orthobiologics company that has commercialised three synthetic bone graft substitutes and has several other projects in R&D. The marketed products, CERAMENT BVF, CERAMENT G (gentamicin) and CERAMENT V (vancomycin), are intended to help orthopaedic surgeons manage bone voids and defects after injuries or diseases affecting bones.

Price performance

%	1m	3m	12m
Actual	10.3	50.2	221.3
Relative*	7.6	47.9	197.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

BONESUPPORT (BONEX)

INVESTMENT SUMMARY

BONESUPPORT's investment case rests on three strategic pillars: effective commercial organisation, products backed by clinical data and R&D innovation. The company is selling CERAMENT bone void filler (BVF) in the US and Europe, and two antibiotic-eluting BVF products CERAMENT G/V in Europe. BONESUPPORT terminated its agreement with its exclusive distributor in the US and has since set up a network of its own independent distributors to promote CERAMENT BVF in the US. The company recently signed agreements with MTF Biologics and Collagen Matrix to grow its product offering sold through its US platform, and has recently launched a new DBM product BONIFY.

INDUSTRY OUTLOOK

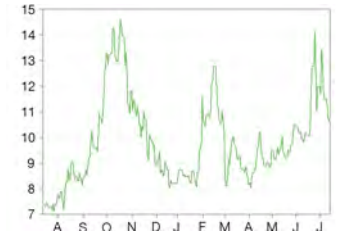
Innovation is one of the key strategic directions for BONESUPPORT to differentiate its products from competitors offering commodity-like bone graft substitutes. The company has gathered data and is undertaking clinical trials to support the claims of its marketed products.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	129.3	(98.1)	(127.1)	(321.63)	N/A	N/A
2018	96.6	(172.8)	(174.1)	(344.64)	N/A	N/A
2019e	199.9	(142.1)	(142.9)	(274.86)	N/A	N/A
2020e	298.9	(76.5)	(81.2)	(153.06)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK10.78
Market cap:	SEK865m
Market	NASDAQ OMX First North

Share price graph (SEK)



Company description

Brighter is a Swedish healthtech company focused on the development and commercialisation of self-monitoring and self-treatment health solutions for diabetes.

Price performance

%	1m	3m	12m
Actual	7.8	7.4	50.8
Relative*	5.2	5.7	39.6

* % 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. The service includes a unique patented device that integrates all the essential features for daily diabetes management, a blood glucose meter, a lancer, an insulin injection pen, into a single unit with built-in mobile connection, and a digital platform for analysing and sharing data with family & friends, healthcare providers and other relevant stakeholders. The service also includes personalized home deliveries of daily consumables and continuous data-based feedback to motivate the user and stimulate increased treatment adherence. By eliminating thresholds and reducing the number of treatment steps to 9 from 28 in comparison to traditional self-blood glucose (SMBG) meters and insulin injection pens, Brighter's goal is to promote patient behavioral change of daily insulin-dependent diabetes management for better treatment outcome.

INDUSTRY OUTLOOK

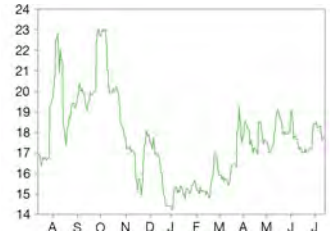
In 2017, costs attributed to diagnosed diabetes and associated complications, such as cardiovascular disease and nephropathy, totalled $327bn in the US. Patient opinions of treatment burden are heavily correlated with adherence to self-care.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	1.4	(19.7)	(22.8)	(40.00)	N/A	N/A
2018	1.1	(44.2)	(48.8)	(74.00)	N/A	N/A
2019e	2.5	(50.9)	(63.5)	(78.25)	N/A	N/A
2020e	24.5	(69.6)	(83.0)	(101.17)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK17.78
Market cap: SEK1294m
Market NASDAQ OMX First North

Share price graph (SEK)



Company description

Cantargia is a clinical stage biotechnology company based in Sweden, established in 2009 and listed on Nasdaq Stockholm main market. It is developing two antibodies against IL1RAP, nidanilimab (CAN04) and CANxx. Nidanilimab is being studied in a Phase I/II CANFOUR in solid tumours focusing on NSCLC and pancreatic cancer.

Price performance

%	1m	3m	12m
Actual	3.1	3.4	7.8
Relative*	0.6	1.8	(0.2)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Cantargia (CANT)

INVESTMENT SUMMARY

Cantargia is developing two antibodies against IL1RAP: Nidanilimab (CAN04) and CANxx. Nidanilimab is currently being studied in a Phase I/II CANFOUR trial where the Phase I part focuses on several solid tumours, and the Phase II part focuses on NSCLC and pancreatic cancer. The Phase I data (n = 22) were presented at ASCO 2019 and demonstrated a good nidanilimab's safety profile and a positive effect on biomarkers. The Phase II part of the study is now enrolling patients. Nidanilimab has a dual mechanism of action: inhibition of IL-1 signaling and antibody-dependent cellular cytotoxicity (ADCC). Novartis is conducting three Phase III trials in NSCLC with canakinumab (IL-1beta antibody) following some intriguing results from its six-year Phase III cardiovascular outcomes study in heart attack patients. Cantargia has recently raised SEK106m (gross) in a directed share issue.

INDUSTRY OUTLOOK

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

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.0	(60.0)	(60.3)	(186.00)	N/A	N/A
2018	0.0	(93.3)	(91.2)	(137.73)	N/A	N/A
2019e	0.0	(94.9)	(94.6)	(136.07)	N/A	N/A
2020e	0.0	(117.8)	(117.8)	(161.82)	N/A	N/A

Sector: Pharma & healthcare

Price: €18.40
Market cap: €172m
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. The development process combines the expertise of a wide range of technical and medical experts.

Price performance

%	1m	3m	12m
Actual	(9.4)	(15.2)	(10.7)
Relative*	(12.3)	(15.8)	(11.8)

* % Relative to local index

Analyst

Maxim Jacobs

Carmat (ALCAR)

INVESTMENT SUMMARY

Carmat is enrolling its 20-patient study for its artificial heart in France, Kazakhstan, the Czech Republic and Denmark. Data from the first cohort of 10 patients indicated that 70% of the patients within that cohort reached the primary endpoint of six-month survival with the bioprosthesis or a successful heart transplant within six months of the device implant. Further enrollment was paused in Q418 as the company perfected the manufacturing process. This new process has now been validated and production for the study has resumed.

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 EU and US prevalence of stage IV heart failure (c 500,000 patients), the shortfall in donor hearts is such that only about 3,800 human heart transplants were performed in Europe and the US in 2013.

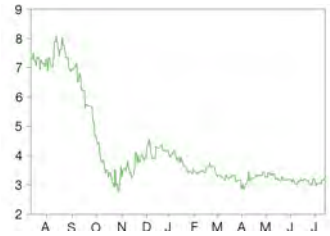
Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.3	(24.1)	(25.7)	(379.73)	N/A	N/A
2017	0.0	(30.3)	(31.5)	(323.54)	N/A	N/A
2018e	0.7	(38.2)	(39.6)	(421.19)	N/A	N/A
2019e	0.0	(24.2)	(28.7)	(311.10)	N/A	N/A

CASI Pharmaceuticals (CASI)

Sector: Pharma & healthcare

Price:	US$3.17
Market cap:	US$303m
Market	NASDAQ

Share price graph (US$)



Company description

CASI is a pharmaceutical company building a portfolio of drugs it intends to prtoduce for Chinese and worldwide markets. These include proprietary drugs licensed from Spectrum , a portfolio of ANDAs, and is expanding a preclinical portfolio.

Price performance

%	1m	3m	12m
Actual	1.0	(1.2)	(58.0)
Relative*	(3.5)	(4.7)	(61.0)

* % Relative to local index

Analyst

Dr Nathaniel Calloway

INVESTMENT SUMMARY

CASI has a multipronged approach to the entrance into the Chinese pharmaceutical market. It recently received approval for 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) and and anti-CD19 CAR-T therapy (CNCT19).

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 (c)	P/E (x)	P/CF (x)
2017	0.0	(10.0)	(10.1)	(16.45)	N/A	N/A
2018	0.0	(19.4)	(20.0)	(23.65)	N/A	N/A
2019e	9.0	(16.4)	(16.8)	(17.20)	N/A	N/A
2020e	33.5	1.6	(2.9)	(2.86)	N/A	N/A

Clal Biotechnology (CBI)

Sector: Pharma & healthcare

Price:	NIS2.14
Market cap:	NIS345m
Market	TASE

Share price graph (NIS)

Company description

Clal Biotechnology Industries is a healthcare investment company focused on investing in a variety of therapeutic, diagnostic, and medical device companies covering a full range of development phases from preclinical to post-market.

Price performance

%	1m	3m	12m
Actual	(7.6)	(26.4)	(32.6)
Relative*	(11.3)	(27.5)	(37.6)

* % Relative to local index

Analyst

Maxim Jacobs

INVESTMENT SUMMARY

Clal Biotechnology (CBI) is a healthcare investment company with an extensive portfolio incorporating a diverse range of technologies, indications and stages of development. CBI holds direct investments in 10 companies (nine biotech and one medical device company), most importantly MediWound, a NASDAQ-listed wound care company and Gamida Cell, which is developing a universal bone marrow transplant product and recently listed on the NASDAQ. Also, Anchiano and Biokine have programmes in Phase III or Phase III ready. The year 2019 has already proven to be eventful for CBI's investments with MediWound announcing a successful Phase III study for NexoBrid as well as a license agreement for that product and Anchiano successfully listing on NASDAQ.

INDUSTRY OUTLOOK

CBI is invested in a variety of life science companies, including a wide and diverse range of technologies, indications and stages of development, all of which have high potential.

Y/E Dec	Revenue (NISm)	EBITDA (NISm)	PBT (NISm)	EPS (NIS)	P/E (x)	P/CF (x)
2017	73.6	(103.3)	(54.2)	(15.02)	N/A	N/A
2018	85.3	(54.0)	(40.9)	(18.21)	N/A	N/A
2019e	N/A	N/A	N/A	N/A	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	€1.16
Market cap:	€18m
Market	Euronext Growth

Share price graph (€)

Company description

Deinove is a biotechnology company that discovers, develops and produces high value-added compounds using its state-of-the-art bacterial strain selection, banking, fermentation and screening facilities. The most valuable compounds in the pipeline are novel antimicrobials, with lead asset DNV3837 ready for Phase II trial.

Price performance

%	1m	3m	12m
Actual	(9.4)	(14.6)	(56.7)
Relative*	(12.3)	(15.2)	(57.3)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Deinove (ALDEI)

INVESTMENT SUMMARY

FY18 has been a pivotal year for Deinove with the launch of two products in its cosmetic division and a number of deals. These include the acquisition of Morphochem's clinical-stage antibiotic DNV3837 (formerly MCB3837) and R&D collaboration agreements with Naicons, bioMérieux and Calibr. More recently, Deinove signed a collaboration agreement with the Institut Pasteur and a product development collaboration with Dow. The launch of a second, internally developed carotenoid product is planned in 2019, while the initiation of the Phase II trial with DNV3837, expected later this year, will be a milestone R&D event. In July 2019, Deinove raised new funds by issuing convertible notes for up to €15m to enable it to launch a Phase II clinical trial for the Morphochem compound and finance its other activities.

INDUSTRY OUTLOOK

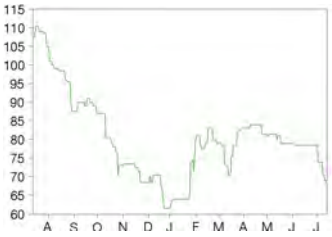
Environmentalism will underpin growth in green chemistry and growing antimicrobial resistance to current antibiotics will demand the discovery of new antibiotic structures.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.2	(8.5)	(9.7)	(67.69)	N/A	N/A
2018	0.8	(9.4)	(10.5)	(61.25)	N/A	N/A
2019e	1.1	(11.8)	(13.2)	(68.40)	N/A	N/A
2020e	2.9	(11.0)	(12.4)	(63.11)	N/A	N/A

Sector: Pharma & healthcare

Price:	68.0p
Market cap:	£30m
Market	AIM

Share price graph (p)



Company description

Destiny Pharma is dedicated to the discovery, development and commercialisation of new antimicrobial agents that have unique properties to improve outcomes for patients. Destiny's first product, XF-73, is about to start a US Phase IIb clinical study.

Price performance

%	1m	3m	12m
Actual	(13.4)	(19.1)	(36.7)
Relative*	(14.9)	(19.5)	(35.0)

* % Relative to local index

Analyst

Andy Smith

Destiny Pharma (DEST)

INVESTMENT SUMMARY

Destiny Pharma is a virtual UK antimicrobial discovery company in Phase II clinical studies in the US. Destiny's XF series of antimicrobial agents are novel, rapidly bactericidal and not associated with bacterial resistance, which typically limits the use of other antimicrobial agents. This makes Destiny's lead product, XF-73, ideal for the prevention of post-operative infections, an indication in which no other drugs have been approved. The activity of the XF-series against resistant bacteria may also have utility in the treatment of infections with a biofilm component like cystic fibrosis. We forecast Destiny's cash reach well into 2020, with Phase IIb results for XF-73 around the end of 2019.

INDUSTRY OUTLOOK

While there are valid commercial criticisms of antibiotic development, the growing problem of antimicrobial resistance is making non-dilutive and alternative funding methods available to make antimicrobial drug development easier on companies. In addition, resistance has not been observed against Destiny's agents and their new preventative indications make antibiotic stewardship less of an issue.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (fd) (p)	P/E (x)	P/CF (x)
2017	0.0	(2.5)	(3.2)	(8.45)	N/A	N/A
2018	0.0	(5.3)	(6.0)	(11.86)	N/A	N/A
2019e	0.3	(8.6)	(8.5)	(17.69)	N/A	N/A
2020e	0.0	(4.7)	(4.7)	(7.06)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS0.84
Market cap:	NIS194m
Market	TASE

Share price graph (NIS)

Company description

Elbit Medical Technologies is an Israeli biomedical and healthcare technology group. Its portfolio of two companies is focused on medical devices and therapeutics: InSightec, which develops and markets the ExAblate platform for non-invasive thermal tissue ablation, and Gamida Cell, which is developing a universal bone marrow transplant.

Price performance

%	1m	3m	12m
Actual	(11.5)	(7.6)	(22.3)
Relative*	(15.1)	(9.0)	(28.0)

* % Relative to local index

Analyst

Maxim Jacobs

Elbit Medical Technologies (EMTC)

INVESTMENT SUMMARY

Elbit Medical Technologies is an Israel-based healthcare investment company. The company holds a ~22% (~18.5% fully diluted) stake in InSightec, a commercial-stage medical device company. InSightec's ExAblate uses MRI and high-intensity focused ultrasound to perform precise and incisionless thermal tissue ablation. ExAblate has achieved FDA and CE approval for three distinct indications, with revenues of $32.1m for FY17. The company is also invested in Gamida Cell (~8%), which is developing omidubicel (NiCord), a product derived from umbilical cord blood (UCB) stem cells, for the treatment of high-risk haematological malignancies. Enrolment is underway for a Phase III study with enrolment expected to be complete in H219 with data in H120. Gamida Cell recently went public on the NASDAQ, raising $53m.

INDUSTRY OUTLOOK

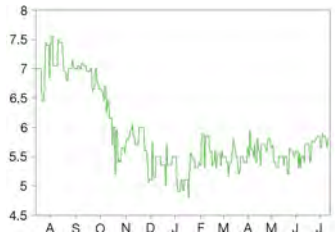
Elbit Medical Technologies is invested in the healthcare sector through its holdings in two companies that are developing medical device and therapeutic technologies.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(0.7)	(5.2)	0.0	N/A	N/A
2018	23.0	22.1	3.8	0.12	1.9	0.1
2019e	N/A	N/A	N/A	N/A	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	€5.80
Market cap:	€35m
Market	NASDAQ OMX Mid Cap

Share price graph (€)



Company description

Herantis Pharma is a Finnish innovative biopharmaceutical company focusing on regenerative medicines for unmet needs. Key assets include CDNF for Parkinson's disease and Lymfactin for breast cancer associated lymphedema.

Price performance

%	1m	3m	12m
Actual	1.8	3.6	(17.1)
Relative*	0.4	8.3	(10.9)

* % Relative to local index

Analyst

Dr Susie Jana

Herantis Pharma (HRTS)

INVESTMENT SUMMARY

Herantis Pharma's two lead assets are cerebral dopamine neurotrophic factor (CDNF), a potential disease-modifying treatment for Parkinson's disease (PD), and Lymfactin, the only gene therapy in development for breast cancer-related associated secondary lymphedema (BCAL). The underlying science for both is novel. Top-line data from an ongoing proof-of-concept Phase I/II trial for CDNF in PD can be expected before end-2019, and the Lymfactin Phase II trial for BCAL (AdeLE) can be expected by end-2020; positive readouts for either would serve as strong validation of the research efforts and could crystallize value through partnering opportunities for these unique assets. €5.8m in funding has been secured to prepare for subsequent clinical development.

INDUSTRY OUTLOOK

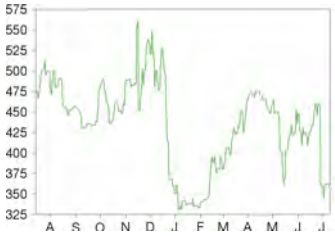
Herantis Pharma is focused on the development of innovative regenerative medicines targeting unmet needs. Key assets include CDNF for Parkinson's disease and Lymfactin for breast cancer-associated lymphedema.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	N/A	(2.2)	(0.5)	N/A	N/A
2018	0.0	N/A	(4.2)	(0.8)	N/A	N/A
2019e	0.0	N/A	(4.5)	(0.9)	N/A	N/A
2020e	0.0	N/A	(4.2)	(0.9)	N/A	N/A

Sector: Pharma & healthcare

Price:	355.0p
Market cap:	£2366m
Market	AIM, NASDAQ

Share price graph (p)



Company description

Hutchison China MediTech (HCM) is an innovative China-based biopharma company targeting the global market for novel, highly selective oral oncology and immunology drugs. Its established China Healthcare business is growing ahead of the market. HCM is the healthcare arm of CK Hutchison (c 40% listed on AIM and NASDAQ).

Price performance

%	1m	3m	12m
Actual	(13.2)	(25.3)	(25.3)
Relative*	(14.7)	(25.7)	(23.2)

* % Relative to local index

Analyst

Dr Susie Jana

Hutchison China MediTech (HCM)

INVESTMENT SUMMARY

Hutchison China MediTech (HCM) has built a substantial pipeline of potentially first-in-class or best-in-class tyrosine kinase inhibitor (TKI) drugs, some of which are in development with strategic partners. HCM has announced positive data that key late-stage asset surufatinib met the primary endpoint of PFS in non-pancreatic NET at the Phase III interim analysis.This translates into an earlier than expected China NDA submission (H219) and the potential launch of HCM's first unpartnered asset (early 2021). We forecast two further product launches on the horizon in 2021/22 (China launch of fruquintinib in gastric cancer and global launch of savolitinib in NSCLC). CKH has completed a secondary offering of ADSs, which has reduced its holding to 51.15% (from 60.2% previously) and increased the free float. At 30 April 2019, HCM had net cash of $236.2m.

INDUSTRY OUTLOOK

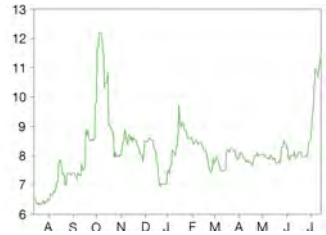
HCM's profitable Chinese healthcare business continues to benefit from the fast-growing domestic market, while the clinical, regulatory and technological environments are highly conducive to novel drug development. In the longer term, if the oncology and immunology pipeline comes to fruition, we expect HCM to become a major Chinese and international oncology company.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	241.2	(50.7)	(53.5)	(4.3)	N/A	N/A
2018	214.1	(89.0)	(86.7)	(11.3)	N/A	N/A
2019e	182.9	(167.8)	(170.5)	(21.2)	N/A	N/A
2020e	194.4	(166.4)	(172.6)	(21.3)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK11.50
Market cap:	SEK1061m
Market	OMX

Share price graph (SEK)



Company description

Immunicum is a clinical-stage immuno-oncology company based in Stockholm, Sweden. The company is developing an allogeneic dendritic cell immune primer for use in combination with other anticancer therapies including CPIs in multiple solid tumour indications.

Price performance

%	1m	3m	12m
Actual	45.2	48.2	79.7
Relative*	41.7	45.9	66.4

* % Relative to local index

Analyst

Dr Jonas Peciulis

Immunicum (IMMU)

INVESTMENT SUMMARY

Immunicum is a NASDAQ Sweden-listed, clinical-stage immunooncology (IO) company that is developing allogeneic dendritic cell technologies. Its first clinical product, ilixadencel, is in Phase I and II combination studies in several solid tumour indications. The funding of SEK351m gross raised in Q418 extended the cash runway until the end of 2021 and several milestones are achievable before then. These include Phase I/II MERECA trial top-line results in Q319, interim safety data from the Phase I/II ILIAD trial around end 2019 and full safety results in 2020. Although full results from the ILIAD trial are not likely until 2022, safety data are key, as this will be the first time ilixadencel is combined with a checkpoint inhibitor and will allow the company to engage in negotiations with potential partners before the full ILIAD results are available.

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 sub-sector over the next several years.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.0	(80.6)	(80.3)	(3.1)	N/A	N/A
2018	0.0	(97.8)	(97.9)	(1.9)	N/A	N/A
2019e	0.0	(119.9)	(119.9)	(1.3)	N/A	N/A
2020e	0.0	(121.6)	(121.6)	(1.3)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.02
Market cap:	A$89m
Market	ASX

Share price graph (A$)

Company description

Immutep has a pipeline of four LAG-3 related product candidates: eftilagimod alpha (IMP321) for cancer chemo-immunotherapy and immunotherapy-immunotherapy combinations, two partnered products IMP731 (GSK) and IMP701 (Novartis), as well as IMP761 for autoimmune diseases.

Price performance

%	1m	3m	12m
Actual	(10.9)	(20.1)	(33.8)
Relative*	(13.0)	(25.3)	(38.1)

* % Relative to local index

Analyst

Maxim Jacobs

Immutep (IMM)

INVESTMENT SUMMARY

Immutep has three promising candidates in clinical trials and one preclinical asset, based on Lymphocyte activation gene-3, LAG-3 (two partnered with GSK and Novartis, respectively). Lead in-house product, eftilagimod alpha (efti), is being developed in metastatic breast cancer combined with chemo (226-patient randomised Phase IIb fully recruited in June 2019, topline PFS data due Q120) and in melanoma in combination with Keytruda (61% exploratory response rate from start of Keytruda monotherapy screening in three dose-finding cohorts, 3/6 (50%) responders in an additional cohort). Novartis and GSK are progressing clinical trials of partnered LAG-3 programmes: GSK has announced ulcerative colitis as lead indication; Novartis has five ongoing Phase I/II studies with LAG525. Immutep is collaborating with Merck & Co (MSD) in a study of efti plus Keytruda in lung and head and neck cancers (first line lung cancer initial cohort fully recruited, data H219). A trial of efti plus Bavencio in collaboration with Merck KGaA/Pfizer commenced in Q219.

INDUSTRY OUTLOOK

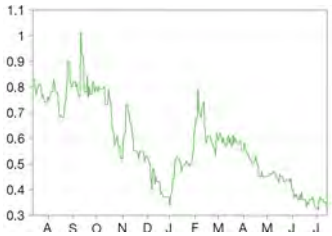
Immunotherapies are among the most promising class of products for cancer and autoimmune diseases. The LAG-3 products are potentially first-in-class, each with distinct mechanisms and applications.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2017	4.1	(7.8)	(8.4)	(0.4)	N/A	N/A
2018	6.9	(11.4)	(10.9)	(0.5)	N/A	N/A
2019e	10.9	(7.6)	(6.9)	(0.2)	N/A	N/A
2020e	2.8	(15.3)	(14.6)	(0.4)	N/A	N/A

Sector: Pharma & healthcare

Price:	C$0.33
Market cap:	C$58m
Market	TSX

Share price graph (C$)



Company description

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

Price performance

%	1m	3m	12m
Actual	(15.2)	(34.3)	(61.1)
Relative*	(16.5)	(34.3)	(60.9)

* % Relative to local index

Analyst

Maxim Jacobs

InMed Pharmaceuticals (IN)

INVESTMENT SUMMARY

InMed is a Canada-based biopharmaceutical company focused on maximizing the therapeutic potential of cannabinoids. Through its biosynthesis platform, the company believes it has distinct advantages over both naturally sourced and chemically synthesized cannabinoids, which could give it access to both the medical and retail markets, although the process is still in development. The company is also developing a proprietary pipeline, including INM-755 for epidermolysis bullosa (EB), a serious orphan indication, and expects to file a CTA for INM-755 in H219 with initiation of a 30 person Phase I by the end of the year.

INDUSTRY OUTLOOK

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

Y/E Jun	Revenue (C$m)	EBITDA (C$m)	PBT (C$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(3.3)	(3.2)	(3.27)	N/A	N/A
2018	0.0	(5.5)	(5.3)	(3.74)	N/A	N/A
2019e	0.0	(9.0)	(8.4)	(4.92)	N/A	N/A
2020e	0.0	(14.0)	(13.9)	(7.79)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.94
Market cap:	US$7m
Market	OTC

Share price graph (US$)

Company description

International Stem Cell is an early-stage biotechnology company developing therapeutic, biomedical and cosmeceutical applications for its proprietary stem form of pluripotent stem cells – human parthenogenetic stem cells (hpSCs). Its lead candidate is a cell therapy treatment for Parkinson's disease.

Price performance

%	1m	3m	12m
Actual	20.5	(23.0)	(41.3)
Relative*	15.2	(25.7)	(45.5)

* % Relative to local index

Analyst

Maxim Jacobs

International Stem Cell (ISCO)

INVESTMENT SUMMARY

International Stem Cell (ISCO) is in Phase I/IIa clinical trials with its ISC-hpNSC therapy to treat Parkinson's disease (PD), and recently completed dosing of the third cohort (a total of 12 patients across all three cohorts) with full data in H120. It also has commercial operations to leverage its human parthenogenetic stem cell technology and generate revenues to partially offset R&D spending for therapeutic development. Lifeline Skin Care (LSC) develops and sells skincare products and Lifeline Cell Technology (LCT) produces human cell culture products for testing. Sales in 2018 were up 48.7% compared with 2017, mainly due to LCT revenues which were up 78.4% year-on-year.

INDUSTRY OUTLOOK

ISCO's technology platform is based on human parthenogenetic stem cells (hpSCs). Parthenogenetic stem cells are created from unfertilised human eggs (oocytes) chemically activated to make the cells pluripotent. As hpSCs express fewer parental histocompatibility antigens, they reduce the risk of immune rejection.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	7.5	(4.6)	(4.9)	(118.86)	N/A	N/A
2018	11.1	(3.2)	(3.5)	(54.38)	N/A	N/A
2019e	9.9	(3.6)	(4.1)	(54.10)	N/A	N/A
2020e	10.7	(7.9)	(9.3)	(116.27)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.41
Market cap:	A$25m
Market	ASX

Share price graph (A$)

Company description

Kazia Therapeutics has two clinical stage anti-cancer drugs: GDC-0084 (targeting glioblastoma) and Cantrixil (targeting ovarian cancer). GDC-0084 was inlicensed from Genentech, and Kazia is seeking other in-licence opportunities.

Price performance

%	1m	3m	12m
Actual	8.0	(13.8)	(17.3)
Relative*	5.5	(19.4)	(22.7)

* % Relative to local index

Analyst

Dr John Savin

Kazia Therapeutics (KZA)

INVESTMENT SUMMARY

Kazia Therapeutics is developing two anti-cancer compounds, including GDC-0084, a PI3K inhibitor licensed from Genentech that has been granted orphan designation for glioblastoma. Its US-based Phase IIa study achieved a higher MTD for GDC-0084 in first-line glioblastoma than Genentech had previously reported for late-stage patients (60mg vs 45mg); a 20-patient expansion cohort is currently being recruited. The Phase IIa will be followed by a randomised Phase IIb trial in 224 first-line glioblastoma patients. Kazia will also investigate GDC-0084 in breast cancer brain metastases (in collaboration with Dana-Farber), in the childhood brain cancer DIPG (with St Jude) and in solid tumour brain metastases with a US-based clinical trials alliance. The Phase I trial of its third-generation benzopyran drug Cantrixil in ovarian cancer identified the MTD and is recruiting a 12-patient expansion cohort to further explore safety and efficacy. While the primary aim was to assess safety, 5 of 9 patients achieved stable disease after two cycles, one of whom went on to achieve a partial response when treated with Cantrixil in combination with chemo.

INDUSTRY OUTLOOK

Kazia Therapeutics is a biotechnology company listed on the ASX and NASDAQ. Its two main drug technology platforms are third-generation benzopyrans and a PI3K inhibitor.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2017	8.6	(10.2)	(10.9)	(22.8)	N/A	N/A
2018	13.0	(4.9)	(6.3)	(12.5)	N/A	N/A
2019e	3.1	(10.5)	(13.9)	(25.1)	N/A	N/A
2020e	3.1	(11.3)	(12.6)	(20.2)	N/A	N/A

Sector: Pharma & healthcare

Price:	€4.93
Market cap:	€136m
Market	Scale

Share price graph (€)

Company description

MagForce has a European approved nanotechnology-based therapy to treat brain cancer. Nanoparticles are injected into the tumour and activated by an external magnetic field, producing heat and thermally destroying or sensitising the tumour.

Price performance

%	1m	3m	12m
Actual	14.7	(0.3)	4.6
Relative*	12.7	(2.9)	6.0

* % Relative to local index

Analyst

Dr Susie Jana

MagForce (MF6)

INVESTMENT SUMMARY

MagForce is progressing its strategy to drive uptake and acceptance (in the US and Europe) of its nanoparticle-based therapy for cancer. MagForce has recently expanded from Germany into Poland and will have four centres in Europe that are commercially capable of treating glioblastoma patients by end-2019. A loan of up to €35m from the European Investment Bank and €5m gross proceeds from a recent private placement will continue to fund the roll-out. A pivotal clinical trial for prostate cancer is ongoing in the US, with commercial treatments potentially starting in Q420 following regulatory approval; the opportunity in the US will become a significant driver for growth in the long term.

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)
2017	0.7	(8.8)	(9.5)	(36.0)	N/A	N/A
2018	0.1	(7.1)	(8.7)	(32.8)	N/A	N/A
2019e	0.7	(9.6)	(10.5)	(38.7)	N/A	N/A
2020e	2.9	(5.3)	(6.6)	(23.7)	N/A	N/A

Sector: Pharma & healthcare

Price:	€6.31
Market cap:	€155m
Market	FRA

Share price graph (€)

Company description

Medigene is a German biotech company focusing on cancer immunotherapy. A T cell receptor (TCR) candidate has recently entered the clinic and a dendritic cell (DC) vaccine Phase I/II clinical study is ongoing in Phase II.

Price performance

%	1m	3m	12m
Actual	(18.8)	(30.2)	(49.3)
Relative*	(20.2)	(32.1)	(48.6)

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Medigene (MDG1)

INVESTMENT SUMMARY

Medigene is focused on the rapid development of its cancer immunotherapy technology platforms: dendritic cell (DC) cancer vaccines, adoptive T-cell therapy (TCR) and T-cell specific antibodies (TABs). For TCRs, Medigene has initiated its first company-led trial with MDG1011 in patients with PRAME expressing AML, MDS or MM. The partnership with bluebird bio, utilising its TCR technology platform, was expanded in 2018 to include six preclinical candidates.The company has announced a collaboration agreement with Roivant/Cytovant for three TCR projects and a DC vaccine, for Greater China, South Korea, and Japan. Medigene is well-funded to execute its clinical programme. As of 31 March gross cash (including time deposits) was €65.5m.

INDUSTRY OUTLOOK

Cancer immunotherapy is attracting huge biotech investor interest. Medigene's DC vaccine technology is a new generation, with multiple potential efficacy and manufacturing benefits over the forerunners, eg Provenge. The TCR programme has similarities to CAR-T products, but with potentially significant efficacy and safety advantages.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	8.9	(14.6)	(15.1)	(71.93)	N/A	N/A
2018	7.8	(16.3)	(16.5)	(69.82)	N/A	N/A
2019e	10.7	(27.6)	(25.9)	(105.46)	N/A	N/A
2020e	9.7	(26.4)	(24.7)	(100.88)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$1.50
Market cap:	A$748m
Market	ASX

Share price graph (A$)

Company description

Mesoblast is developing adult stem cell therapies based on its proprietary MPC and culture-expanded MSC platforms. It has six late-stage clinical trials across four areas.

Price performance

%	1m	3m	12m
Actual	2.7	(1.3)	(3.8)
Relative*	0.3	(7.7)	(10.1)

* % Relative to local index

Analyst

Maxim Jacobs

Mesoblast (MSB)

INVESTMENT SUMMARY

The potentially pivotal 55 paediatric patient acute graft vs host disease (GvHD) study met its primary endpoint, with a 69% overall response rate vs 45% for historical controls (p=0.0003). Survival at day 180 was 69% compared to historical rates of 10–30% in Grade C/D disease patients. Based on these results, the company initiated a rolling BLA submission in May. Importantly, in February 2019, the company announced that their DREAM HF-1 trial of MPC-150-IM in 566 NYHA Class II-III heart failure patients dosed the last patient with results expected in H120. The company expects to meet with the FDA in the coming months to discuss a regulatory filing in LVAD patients.

INDUSTRY OUTLOOK

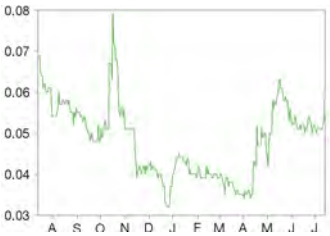
Mesoblast is a leading mesenchymal stem cell company. It has a manufacturing alliance with Lonza. JCR Pharmaceuticals markets Mesoblast's GvHD therapy in Japan; FY18 royalties were US$3.6m plus a US$1.5m milestone.

Y/E Jun	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2017	1.9	(82.2)	(83.3)	(17.69)	N/A	N/A
2018	17.0	(66.2)	(68.6)	(8.35)	N/A	N/A
2019e	N/A	N/A	N/A	N/A	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.06
Market cap:	A$73m
Market	ASX

Share price graph (A$)



Company description

MGC Pharmaceuticals (ASX: MXC) is an Australia-headquartered specialist medical cannabis biopharma company, which has most of its operations based in Europe. Management has many years of technical, clinical and commercial experience in the medical cannabis industry.

Price performance

%	1m	3m	12m
Actual	17.6	39.5	(4.8)
Relative*	14.9	30.5	(10.9)

* % Relative to local index

Analyst

Maxim Jacobs

MGC Pharmaceuticals (MXC)

INVESTMENT SUMMARY

MGC Pharmaceuticals is developing cannabis-based pharmaceutical products, initially in Australia and Europe. It is already growing medicinal cannabis crops in the Czech Republic and has established in Slovenia one of the few fully GMP-certified resin extraction and separation plants in Europe. It plans to establish larger-scale operations in Malta under a contract awarded by the Maltese government in April 2018. It imported the first shipments of GMP-certified CannEpil into Australia and the UK in December 2018 and May 2019, respectively, for prescription by specialist doctors. The company intends to develop CannEpil and CogniCann as registered pharmaceutical treatments for refractory epilepsy, and to improve quality of life in dementia patients, respectively. A Phase II study of CogniCann is underway in Australia. In April, MGC signed a marketing and distribution agreement with Chinese e-commerce platform YuShop Global to sell its CBD and hemp-enhanced Nutraceuticals in China; a market test campaign is underway.

INDUSTRY OUTLOOK

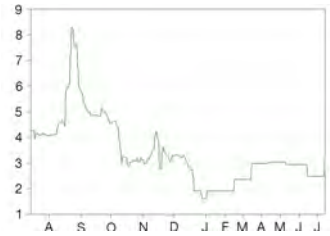
Increasing acceptance and regulatory approvals in many countries have made medicinal cannabis a fast-growing industry. Cannabinoids have generated promising data in many indications and are attracting considerable interest.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.1	(8.5)	(8.5)	(0.9)	N/A	N/A
2018	0.3	(8.9)	(9.0)	(0.8)	N/A	N/A
2019e	1.2	(6.8)	(6.8)	(0.6)	N/A	N/A
2020e	2.4	(7.6)	(7.7)	(0.6)	N/A	N/A

Sector: Pharma & healthcare

Price:	€3.26
Market cap:	€40m
Market	FRA

Share price graph (€)



Company description

Mologen is a German biotech company developing cancer immunotherapies. The lead product is lefitolimod (MGN1703) for metastatic colorectal cancer maintenance, SCLC and HIV. Development of MGN1601, a therapeutic renal cell vaccine, would be reinitiated on successful out-licensing of lefitolimod.

Price performance

%	1m	3m	12m
Actual	31.5	7.6	(18.9)
Relative*	29.2	4.8	(17.8)

* % Relative to local index

Analyst

Dr Susie Jana

Mologen (MGN)

INVESTMENT SUMMARY

Mologen is developing novel immunotherapies for use in the post-chemo maintenance setting (in cancer) and for the treatment of infectious diseases. A pivotal 540-pt Phase III study (IMPALA) for its lead asset lefitolimod in metastatic colorectal cancer maintenance will read out in H219. Mologen has terminated negotiations with Oncologie for the global assignment of lefitolimod and will now look to out-license lefitolimod after the IMPALA trial to achieve the best possible terms. In April Mologen completed a capital increase, raising gross proceeds of €4.2m, providing funding until end-2019 past the IMPALA readout. The deputy chairman of the Supervisory Board, Dr Stefan M Manth, has succeeded the outgoing CEO (Dr Faus) in addition to assuming the outgoing CFO's (Walter Miller) functions from 1 May 2019. Both Dr Faus and Mr Miller left the company 31 March 2019.

INDUSTRY OUTLOOK

Immunotherapies are among the most promising class of products for cancer. Mologen's lead asset lefitolimod is an immunotherapy in development for both cancer maintenance and combination therapies.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.1	(20.6)	(20.8)	(4.22)	N/A	N/A
2017	0.0	(18.7)	(19.3)	(2.81)	N/A	N/A
2018e	3.0	(13.6)	(14.2)	(1.53)	N/A	N/A
2019e	0.0	(16.3)	(17.0)	(1.84)	N/A	N/A

Sector: Pcare & household prd

Price:	7.8p
Market cap:	£6m
Market	AIM

Share price graph (p)

Company description

NetScientific is a transatlantic biomedical and healthcare technology group. Its portfolio of five core investments and one material investment is focused on three main sectors: digital heath (Wanda), diagnostics (Vortex, ProAxsis, Glycotest) and therapeutics (PDS Biotech).

Price performance

%	1m	3m	12m
Actual	(16.2)	(32.6)	(79.9)
Relative*	(17.7)	(33.0)	(79.3)

* % Relative to local index

Analyst

Maxim Jacobs

NetScientific (NSCI)

INVESTMENT SUMMARY

NetScientific has a focused portfolio of potentially disruptive biomedical and healthcare technology investments. Following a review of strategic alternatives, NetScientific has decided to de-list from the AIM and be a private company going forward. They also sold off their interests in core portfolio holdings Wanda and Vortex.

INDUSTRY OUTLOOK

NetScientific remains focused on sourcing, funding and building early- to mid-stage US and UK companies that are developing potentially breakthrough technologies in growing markets with unmet needs.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2016	0.5	(12.6)	(12.3)	(20.6)	N/A	N/A
2017	0.4	(10.8)	(9.5)	(13.6)	N/A	N/A
2018e	N/A	N/A	N/A	N/A	N/A	N/A
2019e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price: SEK1.25
Market cap: SEK233m
Market NASDAQ OTCQX

Share price graph (SEK)

Company description

NeuroVive Pharmaceutical is a Swedish biopharmaceutical company with deep expertise in mitochondrial medicine. It has a diversified portfolio in terms of indications and employs a dual strategy: it develops a core portfolio of assets for orphan diseases and seeks to out-license proprietary products for non-orphan indications.

Price performance

%	1m	3m	12m
Actual	5.9	(11.0)	(75.2)
Relative*	3.4	(12.3)	(77.1)

* % Relative to local index

Analyst

Dr Jonas Peciulis

NeuroVive Pharmaceutical (NVP)

INVESTMENT SUMMARY

NeuroVive Pharmaceutical is a mitochondrial medicine specialist. The company's core portfolio targets orphan indications: traumatic brain injury (TBI) with NeuroSTAT, various genetic mitochondrial diseases with KL1333 and NVP015, and mitochondrial myopathy with NVP025. NeuroVive's IND for clinical development of NeuroSTAT in TBI has been approved by the FDA and preparations for the Phase IIb proof-of-concept study are ongoing. The second most advanced product KL1333, in-licensed from Yungjin Pharm in May 2017, demonstrated positive results in the Phase I trial in South Korea and NeuroVive initiated a Phase Ia/b study in March 2019. So far in 2019, NeuroVive has raised SEK108m net and licensed two research compounds from NVP015 programme to Oroboros.

INDUSTRY OUTLOOK

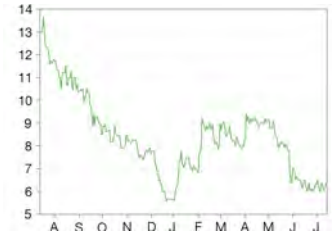
NeuroVive has a diversified portfolio with all assets aimed at improving mitochondrial metabolism and function. We feel this puts NeuroVive among the very few experts in mitochondrial medicine.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (fd) (öre)	P/E (x)	P/CF (x)
2017	0.6	(67.9)	(70.1)	(149.31)	N/A	N/A
2018	2.5	(66.7)	(68.8)	(94.07)	N/A	N/A
2019e	1.5	(91.8)	(92.0)	(63.56)	N/A	N/A
2020e	1.5	(114.9)	(115.0)	(64.60)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF6.30
Market cap: CHF112m
Market Swiss Stock Exchange

Share price graph (CHF)



Company description

Newron is a CNS-focused biotech. Xadago (partnered with Zambon, US WorldMeds, Meiji Seika, Sequirus) for PD has been launched in Europe and the US. Other pipeline assets include Sarizotan (Phase III for RS) and Evenamide (Phase II for schizophrenia).

Price performance

%	1m	3m	12m
Actual	3.3	(30.8)	(52.6)
Relative*	4.3	(32.7)	(57.2)

* % Relative to local index

Analyst

Dr Susie Jana

Newron Pharmaceuticals (NWRN)

INVESTMENT SUMMARY

Newron's lead product, Xadago (safinamide) for Parkinson's disease (PD) has been launched in 14 European countries through commercial partner Zambon, in the US by sublicensee US WorldMeds and in July partner Valeo launched the drug in Canada. Newron will continue to participate in sale through royalty income. The pivotal Phase II/III trial (STARS), investigating sarizotan for awake breathing disorders associated with Rett syndrome, is expected to report top-line data in Q419. Further preclinical/Phase I data are required before Newron can start the two Phase II/III studies for Evenamide (as an add-on to atypical antipsychotics for schizophrenia). As of 31 December 2018, Newron had net cash and short-term investments of €43.9m and can access an additional €40m in loan facilities from the European Investment Bank, the first tranche of which was drawn down in June.

INDUSTRY OUTLOOK

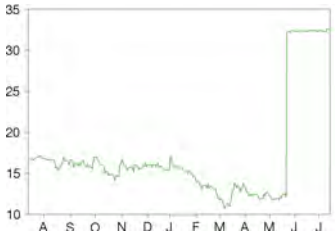
The market for treating CNS disorders is substantial and growing. Xadago has a unique position as an add-on to levodopa therapy in Parkinson's disease, with its once-a-day dosing and a clean safety profile.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	13.4	(4.3)	(5.3)	(32.32)	N/A	N/A
2018	4.0	(14.9)	(15.0)	(84.20)	N/A	N/A
2019e	8.6	(14.3)	(14.2)	(79.39)	N/A	N/A
2020e	21.7	(3.6)	(3.5)	(19.80)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK32.50
Market cap: SEK1610m
Market NASDAQ OMX First North

Share price graph (SEK)



Company description

Nuevolution is a Copenhagen-based biopharmaceutical company. Its patent protected Chemetics drug discovery platform enables the selection of drugs to an array of tough-to-drug disease targets. To date it has entered into 17 agreements with major pharmaceutical companies.

Price performance

%	1m	3m	12m
Actual	0.3	163.2	94.6
Relative*	(2.1)	159.1	80.2

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Nuevolution (NUEV)

INVESTMENT SUMMARY

Amgen has announced a recommended cash offer for Nuevolution's shares of SEK32.50/share, valuing the company at approximately SEK1,610m (US$167m). The offer represents a 169% premium to the closing price (SEK12.10) on 21 May (the day before the announcement) and a 69% premium to the highest trading price (SEK19.26) over the 52-week period (before 21 May 2019). The offer has been accepted by 97.6% shareholders and Amgen has announced that conditions for completion of the offer have either been satisfied or waived, and declares that it is completing the offer. The settlement of the offer was completed on 15 July. Nuevolution has applied to Nasdaq Stockholm for delisting. As of 31 March 2019, Nuevolution had net cash of SEK86m.

INDUSTRY OUTLOOK

Significant promise is seen in DNA-encoded libraries as a result of the potential to rapidly develop small molecule drugs to 'tough-to-drug' targets. We continue to see major investment in the space from an array of companies, notably GSK, Roche and Novartis.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	12.2	N/A	(123.8)	(274.3)	N/A	N/A
2018	11.0	N/A	(107.3)	(217.3)	N/A	N/A
2019e	202.4	N/A	87.2	114.6	28.4	30.2
2020e	336.6	N/A	220.9	290.1	11.2	12.0

Sector: Pharma & healthcare

Price: SEK3.67
Market cap: SEK259m
Market NASDAQ OMX First North

Share price graph (SEK)

Company description

Oncology Venture is a biopharmaceutical company with a patent-protected mRNA-based drug response predictor platform that identifies patients highly likely to respond to treatment. The company is entering Phase II with six in-licensed drugs.

Price performance

%	1m	3m	12m
Actual	2.5	(34.0)	(55.0)
Relative*	0.0	(35.0)	(58.3)

* % Relative to local index

Analyst

Dr Nathaniel Calloway

Oncology Venture (OV.ST)

INVESTMENT SUMMARY

Oncology Venture 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 identify potential responders to different cancer therapies. The company's goal is to then develop is portfolio of drugs that are active within populations that the DRP can identify. To date, the company has in-licensed six drugs and has an option to a seventh drug and is in the early stages of validating the platform in prospective trials in the clinic.

INDUSTRY OUTLOOK

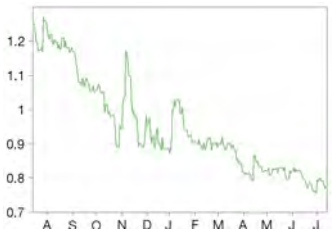
Oncology Venture and the DRP system have the potential to identify the value in drug assets that have otherwise been discontinued by identifying patient populations where these drugs are active. This allows the company to in-license these assets at low cost, which the company may then out-license after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

Y/E Dec	Revenue (DKKm)	EBITDA (DKKm)	PBT (DKKm)	EPS (ore)	P/E (x)	P/CF (x)
2017	5.1	(23.8)	(31.0)	(127.00)	N/A	N/A
2018	2.1	(32.3)	(22.5)	(44.00)	N/A	N/A
2019e	3.6	(210.6)	(211.1)	(264.34)	N/A	N/A
2020e	3.6	(96.9)	(96.0)	(124.58)	N/A	N/A

Sector: Pharma & healthcare

Price:	€0.77
Market cap:	€42m
Market	Euronext Paris

Share price graph (€)



Company description

Onxeo is developing innovative oncology drugs based on DNA-targeting and epigenetics. The lead compound, AsiDNA, is a first-in-class DNA break repair inhibitor based on a unique decoy mechanism and currently evaluated in a phase I trial (DRIIV-1) for systemic administration in solid tumors.

Price performance

%	1m	3m	12m
Actual	(4.9)	(11.0)	(39.8)
Relative*	(8.1)	(11.6)	(40.6)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Onxeo (ONXEO)

INVESTMENT SUMMARY

Onxeo's lead asset AsiDNA, a first-in-class DNA break repair inhibitor, is now being tested in the Phase Ib part of the DRIIV-1 trial at the Institut Curie in Paris in patients with advanced solid tumours in combination with chemotherapy. AsiDNA has already generated supportive data from a Phase I trial in melanoma using intratumoural injection, but is now being tested via systemic administration. Onxeo is conducting a broad preclinical programme that explores AsiDNA in various settings and combinations with other drugs. AsiDNA is part of the proprietary, novel platON platform and is based on decoy oligonucleotides. The platON platform belongs to the so-called DNA damage response (DDR) technology, a domain to which recently marketed PARP inhibitors also belong. After receiving $7.5m from the sale of rights to royalties from Beleodaq and a €5.4m equity financing line, cash reach will extend into Q320 past the AsiDNA Phase I results.

INDUSTRY OUTLOOK

The approval of the first PARP inhibitor (olaparib) has kick started the interest of both the scientific community and large pharma in the DNA Damage Response (DDR) field. Few biotechs are already positioned in this emerging field which may be the successor to immuno-oncology.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2017	9.5	(17.4)	(19.7)	(23.58)	N/A	N/A
2018	6.1	(3.0)	(4.2)	5.09	15.1	N/A
2019e	N/A	N/A	N/A	N/A	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.36
Market cap:	US$6m
Market	NASDAQ

Share price graph (US$)

Company description

OpGen is a diagnostic company focused on revolutionizing the identification and treatment of bacterial infections. The Acuitas AMR Gene Panel molecular test, in combination with the Acuitas Lighthouse bioinformatics product, detects multiple pathogens and predicts antibiotic resistance in less than three hours.

Price performance

%	1m	3m	12m
Actual	(14.9)	(38.5)	(82.9)
Relative*	(18.7)	(40.6)	(84.2)

* % 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. The Acuitas AMR Gene Panel molecular test, in combination with the Acuitas Lighthouse bioinformatics product, allows for the detection of five pathogens as well as 47 resistance genes and mutations, while also predicting the resistance for 14 antibiotics in less than three hours, a major improvement over the two to three days current methods require. OpGen announced that it has filed for 510(k) clearance of its Acuitas AMR Gene Panel test in bacterial isolates in May.

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 (CDC), 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)
2017	3.2	(15.3)	(15.6)	(981.24)	N/A	N/A
2018	2.9	(13.2)	(13.4)	(167.56)	N/A	N/A
2019e	4.0	(13.3)	(13.6)	(87.05)	N/A	N/A
2020e	5.0	(15.3)	(15.5)	(86.63)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK71.60
Market cap: SEK2482m
Market NASDAQ OMX Mid Cap

Share price graph (SEK)

Company description

Orexo is a Swedish speciality pharma company, with expertise in drug delivery/reformulation technologies (in particular sublingual formulations) and a US commercial infrastructure for opioid dependence therapy Zubsolv (also filed in Europe). Orexo also has two clinical assets and three preclinical programmes.

Price performance

%	1m	3m	12m
Actual	(3.6)	(4.5)	89.7
Relative*	(6.0)	(6.0)	75.7

* % Relative to local index

Analyst

Andy Smith

Orexo (ORX)

INVESTMENT SUMMARY

Orexo generated positive EBITDA and operating cash flow generation in FY16, FY17 and FY18. US commercial and public formulary coverage is dynamic but exclusive contracts among private insurers, and state Medicaid are having a positive impact on US Zubsolv volumes and sales. The IP infringement appeal on the US Zubsolv IP was resolved in Orexo's favor without recourse. Zubsolv generics are precluded before September 2032 and the other patent cases against Actavis are subject to Orexo's appeal. Zubsolv was approved in Europe in 2018 and is being partnered in the EU. Orexo's focus now shifts to business development, M&A and sales force leverage while its CoGS reduction is expected to result in a material improvement in profitability. We are cautious on the effect of multiple generic Suboxone film entries on Zubsolv's US market share but point to many other sources of upside in 2019.

INDUSTRY OUTLOOK

Opioid dependence diagnosis/treatment rates are low due to social stigma, limited access to therapy in parts of the US and affordability. Competition includes Suboxone film (Indivior), Bunavail (BDSI) and six generic bup/nal tablets.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	643.7	57.4	29.7	67.00	106.9	16.1
2018	783.1	95.8	92.2	399.01	17.9	16.9
2019e	879.4	215.5	220.6	611.84	11.7	13.8
2020e	852.3	204.9	187.1	491.13	14.6	23.0

Sector: Pharma & healthcare

Price: €3.61
Market cap: €141m
Market Madrid Stock Exchange

Share price graph (€)

Company description

Oryzon Genomics is a Spanish biotech focused on epigenetics. Iadademstat (Phase IIa) is being explored for acute leukaemias and SCLC; vafidemstat, its CNS product, is in Phase IIa trials in MS, AD and aggression. Newer asset ORY-3001 is being developed for certain orphan indications.

Price performance

%	1m	3m	12m
Actual	0.7	(0.4)	(16.4)
Relative*	0.1	1.5	(12.2)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Oryzon Genomics (ORY)

INVESTMENT SUMMARY

Oryzon's expertise lies in developing small molecule inhibitors for epigenetic targets. The company has a total of five Phase II studies ongoing with its two lead assets iadademstat (a specific LSD1 inhibitor) and vafidemstat (a dual LSD1/MAOB inhibitor). In April 2019, the first efficacy data were published from a Phase IIa REIMAGINE trial with vafidemstat in aggressiveness (BPD and adult ADHD cohorts) and showed that all primary and secondary endpoints were met. Further data (in additional psychiatric patients and in AD) will be published in coming months. In June 2019, Oryzon published the first positive data (dose-finding, initial efficacy) from a Phase IIa ALICE trial with iadademstat in AML, while in July 2019 the interim data was presented from the Phase IIa ETHERAL trial with vafidemstat in AD. Two other Phase IIa trials with vafidemstat in MS and iadademstat in SCLC are also expected to deliver data in coming months.

INDUSTRY OUTLOOK

Epigenetics is a relatively young field in terms of drug development. 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)
2017	4.3	(3.5)	(4.6)	(14.29)	N/A	N/A
2018	6.8	(2.8)	(3.7)	(3.37)	N/A	N/A
2019e	6.1	(6.0)	(6.8)	(17.31)	N/A	N/A
2020e	6.1	(6.2)	(6.8)	(17.35)	N/A	N/A

Sector: Pharma & healthcare

Price:	€3.51
Market cap:	€53m
Market	Euronext Paris

Share price graph (€)

Company description

OSE Immunotherapeutics is an immunotherapy company based in Nantes and Paris, France and listed on the Euronext Paris exchange. OSE is currently 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	(1.1)	(14.6)	(8.4)
Relative*	(4.4)	(15.2)	(9.5)

* % Relative to local index

Analyst

Dr Jonas Peciulis

OSE Immunotherapeutics (OSE)

INVESTMENT SUMMARY

OSE Immunotherapeutics is a drug developer that focuses on both oncology and immune disorders, with an R&D pipeline diversified across different indications and mechanisms of action. Long-term collaborations with top research institutions enable the company to identify novel targets in a cost-effective and time-efficient manner, and develop products for R&D and out-licensing. The success of this model is demonstrated by several commercial partnerships, including a deal with Boehringer Ingelheim (BI) in April 2018 for a total value of €1.1bn plus royalties. OSE's most advanced internal programme is Tedopi for NSCLC (Phase III), with first results from 100 patients expected Q419/Q120. In February 2019, a milestone payment was triggered from Servier of €10m and another milestone is expected soon from BI. OSE recently launched a new bispecific platform BiCKI which is in preclinical stage.

INDUSTRY OUTLOOK

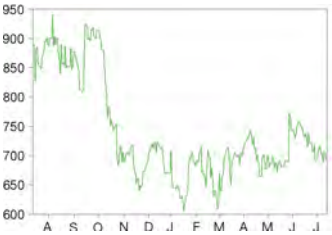
OSE operates within the field of immunotherapy, and has products in development for both immunological diseases and cancer indications. We expect OSE's strong relationships with research institutions and internal expertise to be a significant advantage in continuing to develop pipeline products with partnering potential.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	6.7	(12.5)	(12.6)	(72.0)	N/A	N/A
2018	24.5	5.0	4.8	38.0	9.2	27.6
2019e	27.0	7.5	7.4	50.0	7.0	6.2
2020e	0.0	(19.6)	(19.7)	(133.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	690.0p
Market cap:	£530m
Market	LSE

Share price graph (p)



Company description

Oxford Biomedica's (OXB) LentiVector technology underpins the company's strategy. OXB generates significant revenue from partners that utilise its technology, notably Novartis, Bioverativ, Orchard Therapeutics and Immune Design. OXB is in partnering discussions about internally developed assets.

Price performance

%	1m	3m	12m
Actual	(7.8)	(3.1)	(23.8)
Relative*	(9.3)	(3.7)	(21.8)

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Oxford Biomedica (OXB)

INVESTMENT SUMMARY

Oxford BioMedica (OXB) is a global leader in lentiviral development and manufacturing. Maiden profits last year are evidence of strong operational momentum and ongoing validation of its business model. OXB is expanding its manufacturing facilities, more than doubling its current capacity by 2020 to match the increasing demand and to continue growing its platform revenues. In the near term, revenue will continue to be driven by the Novartis partnership for CAR-T Kymriah as the commercial roll-out continues. OXB has several established development and manufacturing partnerships including Sanofi & Orchard Therapeutics, and is continually looking to spin-out its internally developed assets. Recently, partner Axovant announced positive interim results for AXO-Lenti-PD (in-licensed from OXB) in the ongoing Phase II trial (SUNRISE-PD) which is now enrolling the next dose escalation cohort of patients. As of 31 December, OXB had gross cash of £32.2m.

INDUSTRY OUTLOOK

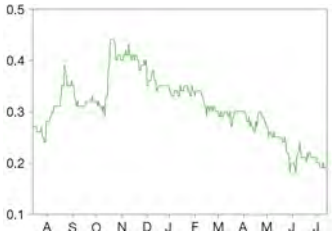
Cell- and gene-therapy is the focus of much industry attention as it can dramatically alter the outcomes of many diseases. OXB's proprietary lentivector platform has demonstrated promise in many indications.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2017	37.6	(2.6)	(13.1)	(16.7)	N/A	143.4
2018	66.8	13.5	0.3	4.3	160.5	35.0
2019e	75.8	15.3	5.5	11.4	60.5	35.1
2020e	88.6	17.6	12.5	19.9	34.7	34.9

Sector: Pharma & healthcare

Price:	NZ$0.19
Market cap:	NZ$99m
Market	NZSX

Share price graph (NZ$)



Company description

Pacific Edge develops and sells a portfolio of molecular diagnostic tests based on biomarkers for the early detection and management of cancer. Tests utilising its Cxbladder technology for detecting and monitoring bladder cancer are sold in the US, New Zealand and Australia.

Price performance

%	1m	3m	12m
Actual	(8.1)	(27.2)	(28.5)
Relative*	(12.2)	(33.2)	(37.9)

* % Relative to local index

Analyst

Maxim Jacobs

Pacific Edge (PEB)

INVESTMENT SUMMARY

Pacific Edge develops and sells a portfolio of molecular diagnostic tests based on biomarkers for the early detection and management of cancer. Tests using its Cxbladder technology for detecting and monitoring bladder cancer are sold in the US, New Zealand, Australia and Singapore. The company recently announced results for 2019, including 12.3% growth in Cxbladder sales compared to 2018. Pacific Edge is in the process of gaining inclusion in the CMS's local coverage determination (LCD), which would enable reimbursement and negotiation for payment of more than 17,015 tests previously performed on patients covered by CMS as of the end of FY19. The company has completed two of the three components necessary for national reimbursement in the US, namely CPT codes and a national price of US$760 per test.

INDUSTRY OUTLOOK

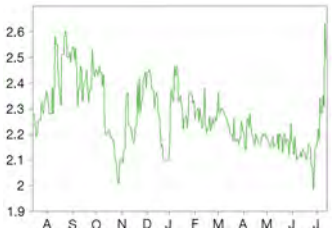
Molecular diagnostics is a growing, but increasingly competitive field. Lead times from the initiation of user programmes to payment can be long.

Y/E Mar	Revenue (NZ$m)	EBITDA (NZ$m)	PBT (NZ$m)	EPS (c)	P/E (x)	P/CF (x)
2018	4.6	(19.5)	(19.6)	(4.5)	N/A	N/A
2019	4.8	(17.8)	(17.8)	(3.7)	N/A	N/A
2020e	5.9	(17.5)	(17.4)	(3.4)	N/A	N/A
2021e	24.5	0.0	(0.2)	0.0	N/A	121.2

Sector: Pharma & healthcare

Price:	€2.49
Market cap:	€159m
Market	FRA

Share price graph (€)



Company description

PAION is a specialty pharma company developing anaesthesia products. Its lead product, remimazolam, is partnered with Mundipharma in Japan, Yichang in China, Hana Pharma in S Korea, Cosmo in the US, Pendopharm in Canada and R-Pharm in CIS, Turkey and MENA.

Price performance

%	1m	3m	12m
Actual	18.0	15.3	13.2
Relative*	16.0	12.3	14.7

* % Relative to local index

Analyst

Dr John Savin

Paion (PA8)

INVESTMENT SUMMARY

Paion is approaching commercialisation of remimazolam, its ultra-short-acting IV sedative/anaesthetic that combines the best features of approved agents midazolam and propofol. Partner Yichang Humanwell filed for approval of remimazolam in procedural sedation in China in November and Mundipharma filed for approval in general anaesthesia (GA) in Japan in December. Cosmo filed for US approval in procedural sedation in April and the FDA accepted the submission for review in June; we expect an FDA decision in April 2020. R-Pharm plans to file for approval in GA in Russia by end 2019. The main aim in the US is to replace midazolam as the sedative of choice for procedures such as colonoscopy and bronchoscopy; faster induction and recovery with remimazolam should increase throughput. Paion has initiated a Phase III in GA in Europe; full recruitment is expected by end 2019. Paion is well funded with cash of €15.6m at 31 March, plus €7.5m in milestones due for the US filing and a €20m loan facility with the European Investment Bank.

INDUSTRY OUTLOOK

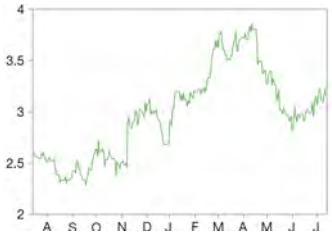
Remimazolam has important advantages over competing products, including fast onset and offset of action with lower risk of cardiopulmonary events than the standard-of-care midazolam and propofol, and a reversal agent exists if there is over sedation.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	5.8	(15.9)	(15.9)	(20.5)	N/A	N/A
2018	2.8	(12.5)	(12.4)	(15.9)	N/A	N/A
2019e	7.6	(11.5)	(11.4)	(14.6)	N/A	N/A
2020e	25.1	10.9	10.9	19.8	12.6	14.6

Sector: Pharma & healthcare

Price:	US$3.13
Market cap:	US$378m
Market	NASDAQ

Share price graph (US$)



Company description

PDL has reinvented itself through a three-pronged strategy: investing in royalty streams of marketed and development-stage therapeutics and providing high-yield debt financing to device & diagnostic companies with near-term product launches.

Price performance

%	1m	3m	12m
Actual	5.0	(17.6)	22.3
Relative*	0.4	(20.5)	13.5

* % Relative to local index

Analyst

Maxim Jacobs

PDL BioPharma (PDLI)

INVESTMENT SUMMARY

PDL BioPharma is a healthcare-focused company with a three-pronged strategy: investing in royalty streams, providing high-yield financing to life science companies with near-term product launches as well as purchasing all or part of commercial or near-commercial pharmaceutical companies. This strategy allows investors to gain exposure in healthcare through a relatively low-risk, diversified vehicle. PDL recently invested $60m in two tranches of $30m each in Evofem, a women's health company that is preparing to submit an NDA for Amphora, a non-hormonal female contraceptive, in Q419 with approval expected in Q220. According to the CDC, 61.7% of the 60.9 million women aged 15–44 use contraception and according to Evaluate Pharma, $6.5bn worth of hormonal contraceptives were sold in 2018.

INDUSTRY OUTLOOK

PDL BioPharma is one of the only companies that will give broad exposure to diverse royalty streams as well as corporate debt and high margin approved products.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	320.1	218.8	200.3	81.33	3.8	12.0
2018	198.1	84.1	78.8	45.22	6.9	N/A
2019e	123.5	39.0	34.7	21.23	14.7	N/A
2020e	125.7	41.0	37.5	24.04	13.0	N/A

Sector: Pharma & healthcare

Price:	NOK57.50
Market cap:	NOK1253m
Market	Oslo

Share price graph (NOK)

Company description

Photocure specialises in photodynamic therapy. Its bladder cancer imaging product is sold as Hexvix in Europe and Cysview in the US. Photocure handles the marketing in Nordic countries and the US, while Ipsen is its marketing partner in the EU.

Price performance

%	1m	3m	12m
Actual	34.0	26.9	82.5
Relative*	30.7	29.4	91.2

* % Relative to local index

Analyst

Maxim Jacobs

Photocure (PHO)

INVESTMENT SUMMARY

Photocure is a commercial-stage Norwegian specialty pharmaceutical company that currently markets Hexvix/Cysview for diagnosing and managing bladder cancer. Recently, the US Centers for Medicare & Medicaid Services (CMS) issued a final rule that would improve reimbursement for a large number of procedures. Also, following positive Phase III results in the surveillance setting, the company received FDA approval for that indication and launched the product in May. Sales may have significant upside if the product successfully expands into the US bladder cancer surveillance market, which has 1.2m-1.4m procedures per year, compared to its original market of 325,000 transurethral resection of the bladder (TURB) procedures.

INDUSTRY OUTLOOK

Photocure is a photodynamic therapy company focused on bladder cancer. As its products typically are a combination of a drug and a device, hurdles for generics are typically higher than with other therapeutics.

Y/E Dec	Revenue (NOKm)	EBITDA (NOKm)	PBT (NOKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	150.9	(33.1)	(41.6)	(161.0)	N/A	N/A
2018	181.5	(10.5)	(22.5)	(104.0)	N/A	N/A
2019e	285.0	67.0	51.7	171.0	33.6	34.1
2020e	294.8	67.8	61.1	202.0	28.5	38.1

Sector: Pharma & healthcare

Price:	€1.39
Market cap:	€29m
Market	Euronext Paris

Share price graph (€)

Company description

Pixium Vision develops retinal implants for patients with severe vision loss. PRIMA, a wireless sub-retinal implant, designed for Dry-ARMD patients, is in a human clinical stage in Europe and is recruiting patients in its US feasibility study.

Price performance

%	1m	3m	12m
Actual	(4.7)	(18.7)	(25.9)
Relative*	(7.8)	(19.3)	(26.9)

* % 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. It announced in early 2019 positive data from its European feasibility study, designed to assess Prima in patients with advanced atrophic dry age-related macular degeneration. All five implantations were followed by successful activations (resulting in reported light perception in areas where there had been none prior to implantation). Pixium plans to start implantations as part of a five-patient US Prima feasibility study in H219 and to start an EU pivotal study.

INDUSTRY OUTLOOK

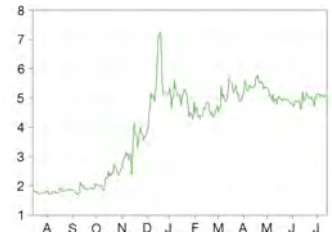
Pixium held €12.9m in gross cash at 31 March 2019, which we estimate will fund operations into Q220. Prima has been designed and being evaluated in clinical studies as a potential treatment option for dry ARMD, a common disease in aging population and a significant unmet medical need.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	2.5	(11.7)	(13.5)	(102.07)	N/A	N/A
2018	1.6	(6.1)	(8.1)	(43.67)	N/A	N/A
2019e	1.6	(8.7)	(10.6)	(48.11)	N/A	N/A
2020e	0.0	(16.9)	(21.7)	(98.70)	N/A	N/A

Sector: Pharma & healthcare

Price:	€5.13
Market cap:	€87m
Market	Euronext Paris

Share price graph (€)



Company description

Quantum Genomics is a biopharmaceutical company developing QGC001, a brain aminopeptidase A inhibitor for the treatment of hypertension and heart failure. Its mechanism is implicated in the 25% of patients resistant to treatment.

Price performance

%	1m	3m	12m
Actual	9.1	(5.4)	181.9
Relative*	5.6	(6.1)	178.2

* % 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. The company recently released data from the Phase IIb NEW-HOPE trial, which 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. A pivotal Phase III in resistant hypertension patients is expected to begin in H219. The company recently initiated their Phase IIb of firibastat in heart failure patients, with results expected in H220.

INDUSTRY OUTLOOK

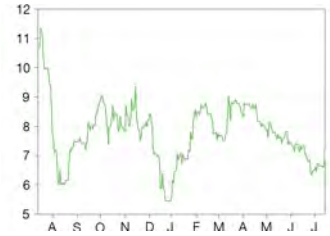
The angiotensin pathway is one of the primary methods of modulating blood pressure and is the target of many anti-hypertensive drugs, including ACE's and ARB's. However, there is a parallel pathway in the brain responsible for the secretion of vasopressin and heart rate that is unaddressed by current 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)
2017	0.0	(10.3)	(10.3)	(93.45)	N/A	N/A
2018	0.0	(13.6)	(13.6)	(93.94)	N/A	N/A
2019e	0.0	(16.8)	(17.6)	(88.49)	N/A	N/A
2020e	0.0	(20.9)	(23.1)	(111.62)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$7.40
Market cap:	US$210m
Market	NASDAQ, TASE

Share price graph (US$)



Company description

RedHill Biopharma is a specialty pharma company with a broad R&D pipeline focusing on gastrointestinal and inflammatory diseases and also promotes several GI products in the US. The most advanced programs are TALICIA for H. pylori infection, RHB-104 for Crohn's disease, BEKINDA for gastroenteritis and IBS-D, and RHB-204 for NTM.

Price performance

%	1m	3m	12m
Actual	1.0	(14.0)	(27.9)
Relative*	(3.5)	(17.0)	(33.0)

* % Relative to local index

Analyst

Dr Jonas Peciulis

RedHill Biopharma (RDHL)

INVESTMENT SUMMARY

RedHill has a broad R&D pipeline and is focusing on GI and inflammatory diseases. The most advanced assets are TALICIA (RHB-105) for Helicobacter pylori infection (PDUFA date 2 November 2019); RHB-104 for Crohn's disease (positive top-line results from first Phase III announced July 2018); BEKINDA for both gastroenteritis (positive results from first Phase III announced June 2017) and IBS-D (positive final Phase II results announced January 2018); and RHB-204 for pulmonary non-tuberculous mycobacteria infections (pivotal Phase III trial to start in H219). RedHill promotes several GI products in the US (Donnatal, EnteraGam and Mytesi). The company raised $20m gross from its recent offering in December 2018.

INDUSTRY OUTLOOK

RedHill's main focus on GI and inflammation include a range of conditions, which although can be treated with a variety of innovative and established products, there is still an unmet need in each of the diseases. In our view, carefully positioned, innovative solutions for the patients will attract attention.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2017	4.0	(51.9)	(45.5)	(25.79)	N/A	N/A
2018	8.4	(39.2)	(38.8)	(16.79)	N/A	N/A
2019e	10.0	(36.5)	(36.5)	(12.88)	N/A	N/A
2020e	13.0	(35.7)	(35.8)	(12.60)	N/A	N/A

Sector: Pharma & healthcare

Price:	237.5p
Market cap:	£76m
Market	LSE

Share price graph (p)

Company description

ReNeuron is a UK biotech company developing allogeneic cell therapies: CTX neural stem cell products for stroke disability (Phase IIb) and human retinal progenitor cells for retinitis pigmentosa (Phase I/II).

Price performance

%	1m	3m	12m
Actual	2.2	0.2	141.1
Relative*	0.4	(0.4)	147.7

* % Relative to local index

Analyst

Andy Smith

ReNeuron Group (RENE)

INVESTMENT SUMMARY

ReNeuron is focused on three cell therapy-based programs. The CTX neural stem cell program demonstrated positive response rates in key measures that were sustained after extended follow-up. ReNeuron has started the placebo-controlled Phase IIb trial in chronic stroke disability with data expected in H2 2020. ReNeuron also has the hRPC (human retinal progenitor cells) program for retinitis pigmentosa (currently in a Phase I/IIb study). Interim and follow-up data on the RP Phase I/II study was announced in early 2019 and early efficacy was striking with more data in H219. Both CTX and hRPC products have been partnered with Fosun in China. The exosome platform (generated from the CTX cell line) is a further source of products and business development for ReNeuron.

INDUSTRY OUTLOOK

Limited drug development has targeted chronic stroke to date, which is the area in which ReNeuron is attempting to demonstrate a meaningful reduction in disability. If shown, it would offer a compelling case for further development and/or partnering. The recent striking RP data makes a partnering transaction more likely and has become the focus for investors.

Y/E Mar	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2018	0.9	(20.2)	(21.0)	(55.66)	N/A	N/A
2019	2.7	(18.0)	(17.2)	(45.16)	N/A	N/A
2020e	0.0	(24.1)	(24.1)	(63.67)	N/A	N/A
2021e	0.0	(27.9)	(27.9)	(73.74)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK17.10
Market cap:	SEK326m
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 currently 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	(9.0)	(48.0)	(42.6)
Relative*	(11.3)	(47.0)	(39.9)

* % Relative to local index

Analyst

Dr Jonas Peciulis

RhoVac (RHOVAC)

INVESTMENT SUMMARY

RhoVac is developing RV001, a cancer immunotherapy designed to prevent or limit metastasis by activating T-cells against cells with metastatic potential. The therapy contains fragments of the protein RhoC, which is overexpressed in cells with metastatic potential across a range of cancers. The recently raised SEK154m net will be used for a Phase IIb study in prostate cancer (results in H221) and a potential Phase II combination study with a checkpoint inhibitor in a different solid tumour indication. RhoVac will require a partner following positive Phase IIb results.

INDUSTRY OUTLOOK

Metastatic cancer is the most advanced stage of cancer and is terminal. Unfortunately, a large proportion of patients who are diagnosed with cancer already have metastases. Preventing or halting metastasis through inhibiting the metastatic cascade or selectively killing cells with metastatic potential could help to improve survival.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.0	(12.9)	(12.9)	(134.0)	N/A	N/A
2018	0.0	(20.1)	(20.2)	(195.0)	N/A	N/A
2019e	0.0	(37.0)	(36.6)	(256.0)	N/A	N/A
2020e	0.0	(50.0)	(49.4)	(259.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	€19.95
Market cap:	€1119m
Market	Madrid Stock Exchange

Share price graph (€)

Company description

Laboratorios Farmacéuticos ROVI is a fully integrated Spanish speciality pharmaceutical company involved in the development, in-licensing, manufacture and marketing of small molecule and speciality biologic drugs with a particular expertise in low molecular weight heparin (LMWH).

Price performance

%	1m	3m	12m
Actual	(2.7)	10.2	20.5
Relative*	(3.3)	12.3	26.7

* % Relative to local index

Analyst

Dr Susie Jana

ROVI Laboratorios Farmaceuticos (ROVI)

INVESTMENT SUMMARY

ROVI is a profitable speciality healthcare company that markets ~40 proprietary and in-licensed products across nine core franchises, mainly in its domestic Spanish market. ROVI is at a major inflection point since obtaining market authorisation for its internally developed enoxaparin biosimilar (Becat) in 24 EU countries (ahead of any competition). ROVI has commenced marketing in several European countries and has signed out-licensing agreements that cover 69 countries globally - key drivers for sales and operating growth in the medium term. R&D progress continues with its proprietary ISM technology. Notably, its Risperidone ISM (DORIA), a long-acting injectable for schizophrenia, has recently completed a Phase III study, meeting its pre-specified primary endpoint; NDA fillings can be expected by end-2019.

INDUSTRY OUTLOOK

ROVI has a strong presence in the Spanish heparin market (and select international markets through partners), where it has been manufacturing and marketing its flagship product, Hibor (second-generation LMWH), since 1998.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	277.4	29.9	20.3	39.99	49.9	55.4
2018	304.8	29.5	19.3	38.76	51.5	117.5
2019e	341.0	31.1	19.7	33.70	59.2	124.4
2020e	370.4	50.2	34.7	58.97	33.8	62.2

Sector: Pharma & healthcare

Price: 60.00PLN
Market cap: PLN958m
Market Warsaw Stock Exchange

Share price graph (PLN)

Company description

Selvita is an R&D and drug discovery services company. It operates three business segments: Innovations Platform (internal R&D pipeline), Research Services (medicinal chemistry/biology, biochemistry) and Ardigen (a spin-out bioinformatics company, 52% owned).

Price performance

%	1m	3m	12m
Actual	7.1	(7.4)	10.9
Relative*	5.6	(5.4)	3.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

Selvita (SLV)

INVESTMENT SUMMARY

Selvita's ongoing split into two separate companies will be the hallmark event in 2019. By the end of this year, the drug discovery services and oncology R&D will be split into separate listed entities (subject to financial authority and shareholder approval). We believe both businesses have sufficient momentum to sustain such a split. The profitable Services segment again delivered substantial sales growth of 34% in 2018 followed by 29% q-o-q growth in Q119. The R&D pipeline is progressing according to plan and two clinical trials with SEL24 and SEL120 could deliver data over 2019–20. The lead product is SEL120, a CDK8 inhibitor, partnered with the Leukemia & Lymphoma Society for AML. Recently the FDA cleared an IND application to conduct a Phase I trial. SEL24 is a dual PIM/FLT3 inhibitor in Phase I/II for AML out-licensed to Menarini in March 2017.

INDUSTRY OUTLOOK

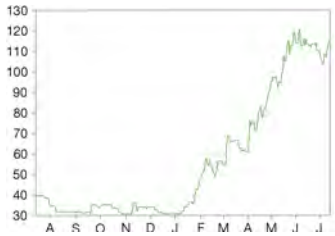
The profiles of SEL24 and SEL120 are potentially unique compared to existing clinical-stage competitors and both candidates may offer efficacy advantages. Contract research is a fiercely competitive, but still rapidly growing market and we believe Selvita's geographical location and lower cost benefits make it well placed to compete.

Y/E Dec	Revenue (PLNm)	EBITDA (PLNm)	PBT (PLNm)	EPS (gr)	P/E (x)	P/CF (x)
2017	105.9	18.5	10.2	50.76	118.2	80.7
2018	110.1	(5.4)	9.0	(0.68)	N/A	N/A
2019e	130.7	(7.8)	(13.1)	(88.05)	N/A	N/A
2020e	153.1	(1.7)	(10.7)	(73.04)	N/A	N/A

Sector: Pharma & healthcare

Price: 115.5p
Market cap: £135m
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 for iron deficiency and is undergoing review with the US FDA. Feraccru is currently marketed through partners Norgine, AOP Orphan and Ewopharma.

Price performance

%	1m	3m	12m
Actual	2.2	42.6	192.4
Relative*	0.5	41.7	200.4

* % 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, approved by the EMA for the treatment of iron deficiency, with or without anaemia. The commercialisation of Feraccru in key markets (ex-US) is in the hands of distribution partners Norgine, AOP Orphan and Ewopharma. Positive top-line data from a Phase IIIb marketing study (AEGIS-H2H) should drive clinical uptake and aid top-line growth. Shield retains the US marketing rights for Feraccru and will seek a partner once a decision on regulatory approval is reached by the US FDA (PDUFA date 27 July 2019).

INDUSTRY OUTLOOK

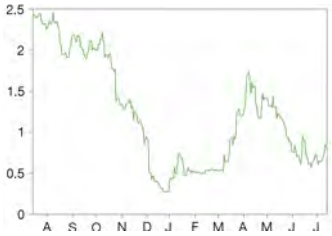
The market for iron deficiency is substantial, and Feraccru is a unique oral formulation of iron developed to overcome the side effect profile of salt-based oral iron therapies, and provides an alternative treatment to intravenously (IV) administered iron.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2017	0.6	(18.5)	(18.4)	(17.4)	N/A	N/A
2018	11.9	(2.8)	(5.2)	(2.0)	N/A	N/A
2019e	3.0	(7.0)	(9.4)	(6.5)	N/A	N/A
2020e	2.7	(7.9)	(10.2)	(7.8)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.85
Market cap:	US$86m
Market	NASDAQ

Share price graph (US$)



Company description

Sunesis Pharmaceuticals is a pharmaceutical company focused on oncology. The company has developed vecabrutinib, a BTK inhibitor for CLL for Imbruvica refractory patients currently in Phase I/II.

Price performance

%	1m	3m	12m
Actual	21.1	(45.5)	(64.4)
Relative*	15.8	(47.4)	(67.0)

* % Relative to local index

Analyst

Dr Nathaniel Calloway

Sunesis Pharmaceuticals (SNSS)

INVESTMENT SUMMARY

Sunesis is a pharmaceutical company developing small molecule oncology drugs. Its lead programme is vecabrutinib, a novel non-covalent, oral BTK inhibitor that may work in Imbruvica relapsed and refractory patients. Data from a Phase Ia study in healthy volunteers were recently presented and indicated an attractive PK/PD profile with twice-a-day dosing. The programme is in a dose-escalation Phase Ib/II trial. It has also developed TAK-580 with partner Takeda, and the preclinical PDK1 inhibitor SNS-510.

INDUSTRY OUTLOOK

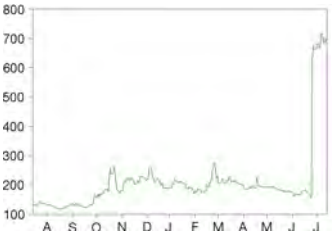
Sunesis is an oncology company with an early-stage asset with a validated target for the treatment of B-cell malignancies.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.7	(34.4)	(35.5)	(144.63)	N/A	N/A
2018	0.2	(25.7)	(26.6)	(74.80)	N/A	N/A
2019e	0.0	(28.1)	(28.6)	(38.67)	N/A	N/A
2020e	0.0	(29.3)	(33.2)	(42.91)	N/A	N/A

Sector: Pharma & healthcare

Price:	¥677.00
Market cap:	¥16494m
Market	Tokyo

Share price graph (¥)



Company description

SymBio is a Japanese specialty pharma company with a focus on oncology and haematology. Treakisym is SymBio's branded formulation of bendamustine HCl. Rigosertib was in-licensed from Onconova.

Price performance

%	1m	3m	12m
Actual	(4.4)	(10.0)	30.2
Relative*	(5.7)	(8.3)	41.2

* % Relative to local index

Analyst

Dr Nathaniel Calloway

SymBio Pharmaceuticals (4582)

INVESTMENT SUMMARY

SymBio is a speciality pharma focused on Asia-Pacific markets and has in-licensed two orphan blood cancer products. 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; the additional approvals saw in-market Treakisym sales increase 11% in Q119, following 12% growth in 2018 and 61% growth in 2017 (NHI price basis). 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, which would reduce Treakisym infusion time from 60 minutes to 10. A Phase III trial of Treakisym in r/r diffuse large B-cell lymphoma completed enrolment in April. Rigosertib iv is in development for r/r HR-MDS and is in a pivotal Phase III global study in 360 patients; SymBio is enrolling patients in Japan and aims for potential filing in 2021. SymBio intends to participate in a planned global trial of high-dose oral rigosertib in untreated HR-MDS.

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 operating leverage.

Y/E Dec	Revenue (¥m)	EBITDA (¥m)	PBT (¥m)	EPS (fd) (¥)	P/E (x)	P/CF (x)
2017	3444.0	(3917.0)	(3977.0)	(79.8)	N/A	N/A
2018	3836.0	(2621.0)	(2749.0)	(41.4)	N/A	N/A
2019e	4109.0	(3664.0)	(3679.0)	(41.0)	N/A	N/A
2020e	3293.0	(5273.0)	(5303.0)	(54.5)	N/A	N/A

Sector: Pharma & healthcare

Price:	NOK6.77
Market cap:	NOK429m
Market	Oslo

Share price graph (NOK)

Company description

Targovax is an immuno-oncology company headquartered in Oslo, Norway, with two technology platforms: ONCOS-102 and TG. ONCOS-102 is currently prioritised and is an oncolytic virus technology being developed in several indications. The TG therapeutic cancer vaccine platform has been deprioritised.

Price performance

%	1m	3m	12m
Actual	42.5	9.0	(38.8)
Relative*	38.9	11.2	(35.9)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Targovax (TRVX)

INVESTMENT SUMMARY

Targovax is an immunooncology (IO) company specialising in oncolytic viruses. ONCOS-102 is a genetically engineered adenovirus being tested in advanced melanoma, mesothelioma, peritoneal malignancies and prostate cancer. In July 2019, Targovax announced ORR and immune activation data from the Part 1 of the ONCOS-102 Phase I study with patients with advanced, unresectable melanoma. The patients, who were treated with checkpoint inhibitors (CPIs) before and then relapsed, were given three intratumoural injections of ONCOS-102 and then received up to eight infusions of Keytruda. The rationale of the study was to prime the immune system with a virus to generate a cancer-specific response and then 'release the brakes' with checkpoint inhibitors. The initial data showed 33% ORR, which is promising in this setting. The next ONCOS-102 data are due around New Year (Phase I/II mesothelioma). In H119, Targovax raised NOK88m (gross).

INDUSTRY OUTLOOK

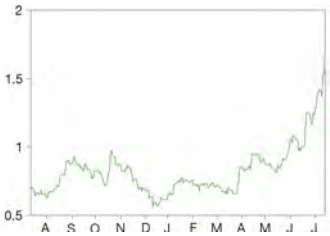
CPIs have gained popularity over the past several years, however, a large proportion of patients do not respond to them. Targovax's oncolytic virus technology is designed to prime immune response to cancers, which offers synergies for use in combination with other immunooncology therapies.

Y/E Dec	Revenue (NOKm)	EBITDA (NOKm)	PBT (NOKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.0	(119.6)	(122.3)	(258.06)	N/A	N/A
2018	0.0	(145.8)	(147.3)	(279.43)	N/A	N/A
2019e	0.0	(139.9)	(140.2)	(241.84)	N/A	N/A
2020e	0.0	(136.9)	(137.2)	(216.82)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$1.67
Market cap:	A$399m
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.

Price performance

%	1m	3m	12m
Actual	68.7	75.8	142.0
Relative*	64.7	64.3	126.4

* % Relative to local index

Analyst

Dr Nathaniel Calloway

Telix Pharmaceuticals (TLX)

INVESTMENT SUMMARY

Telix is developing diagnostic and therapeutic radiopharmaceuticals for kidney, prostate and brain cancers. It acquired full global rights to the investigational TLX591-CDx prostate cancer imaging kit in December. It is commercialising TLX591-CDx (illumet) in the US and Europe, and anticipates filing for FDA approval in 2019 (pre-NDA meeting request submitted). Telix expects to fully enroll the ZIRCON Phase III for kidney cancer imaging agent TLX250-CDx by end 2019/early 2020. Preliminary data from the IPAX-1 Phase I/II study of TLX101 therapy in brain cancer are expected in Q319. Telix plans to progress TLX591 therapy into Phase III in chemo-naive prostate cancer in Q319. Two TLX250/I-O combo studies in kidney cancer are planned for mid-2019.

INDUSTRY OUTLOOK

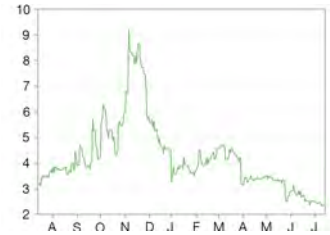
Big pharma has shown keen interest in MTR products. In 2017 Novartis acquired Advanced Accelerator Applications, the developer of the MTR therapeutic Lutathera, for US$3.9bn. In 2014 Bayer acquired Algeta for ~US$2.6bn; Algeta had developed Xofigo, a therapeutic radiopharmaceutical for prostate cancer. In December 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)
2017	0.4	(6.4)	(6.4)	(4.98)	N/A	N/A
2018	10.3	(17.5)	(15.7)	(6.84)	N/A	N/A
2019e	9.4	(20.0)	(24.1)	(11.02)	N/A	N/A
2020e	9.4	(19.2)	(23.5)	(10.78)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.35
Market cap:	US$2m
Market	NASDAQ, TASE

Share price graph (US$)



Company description

Therapix Biosciences is an Israeli pharmaceutical company developing two cannabinoids to treat Tourette syndrome and mild cognitive impairment. It is currently in Phase IIa and soon to begin Phase I, respectively, and owns or licenses several IPs for cannabinoid nasal and sublingual administration.

Price performance

%	1m	3m	12m
Actual	(19.0)	(28.8)	(30.5)
Relative*	(22.6)	(31.3)	(35.4)

* % Relative to local index

Analyst

Maxim Jacobs

Therapix Biosciences (TRPX)

INVESTMENT SUMMARY

Therapix is investigating the potential of new formulations of cannabinoids to address underserved diseases of the brain. Therapix recently announced the results of its Phase IIa study of THX-110 for the treatment of Tourette syndrome (TS). The study showed a statistically significant (p=0.002) reduction in tic severity of 21%. The company also recently announced interim data of THX-110 in obstructive sleep apnea (OSA). Out of the seven patients who completed the study, four exhibited significant improvements in endpoints such as reduction in Apnea-Hypopnea Index (AHI) scale and the oxygen desaturation index (ODI), with one patient showing mild improvement.

INDUSTRY OUTLOOK

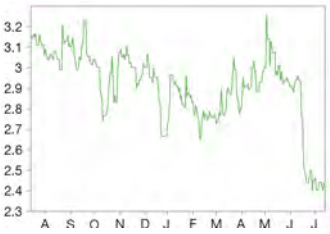
Diseases of the brain are a major unmet medical need with few effective or approved therapies for a host of diseases. Cannabinoids have had promising data in many indications in the area and is a class that has received a lot of interest.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	0.0	(1.7)	(1.7)	(179.9)	N/A	N/A
2017e	0.0	(4.0)	(4.3)	(118.4)	N/A	N/A
2018e	0.0	(7.7)	(7.7)	(200.1)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.44
Market cap:	€203m
Market	Euronext Paris

Share price graph (€)



Company description

Transgene is a French company developing immunotherapy agents for cancer and infectious diseases. Oncolytic virus Pexa-Vec (Phase III for HCC) and cancer vaccine TG4010 (Phase II for NSCLC) are the lead clinical candidates.

Price performance

%	1m	3m	12m
Actual	(14.6)	(16.4)	(21.1)
Relative*	(17.4)	(17.1)	(22.1)

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Transgene (TNG)

INVESTMENT SUMMARY

Transgene is developing viral vector-based immunotherapies for combination therapies in oncology and infectious diseases. The company is running multiple clinical trials, including a Phase 2 trial combining TG4010 with Opdivo and chemotherapy in 1L NSCLC, and a Phase 1b/2 trial with Pexa-Vec+Opdivo in 1L advanced liver cancer. Transgene and partner SillaJen are running a global 600-patient Phase 3 study (PHOCUS) for Pexa-Vec+sorafenib in advanced liver cancer. Next-generation platforms Invir.IO and myvac continue to progress, with new myvac asset TG4040 expected to enter the clinic in H219. Transgene announced a new collaboration/licensing agreement with AstraZeneca for its Invir.IO platform; Transgene received €10m on signing. Gross cash and short-term investments at 31st March 2019 (not including AZN upfront) were €9.1m. Transgene has secured a €20m revolving credit facility with Natixis secured against its Tasly Biopharmaceuticals shares. Transgene additionally recently raised gross €48.7m in a rights issue.

INDUSTRY OUTLOOK

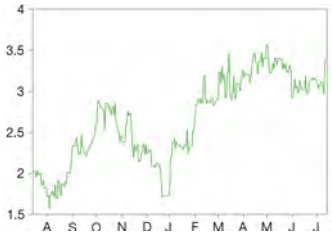
Immunotherapies are among the most promising class of products for cancer. Increased attention is now being paid to the use of combination therapy approaches to improve cancer response rates further.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2017	8.1	(26.4)	(35.0)	(53.1)	N/A	N/A
2018	42.9	9.1	(36.8)	(44.7)	N/A	N/A
2019e	9.2	(21.1)	(26.2)	(42.1)	N/A	N/A
2020e	6.7	(23.9)	(28.7)	(46.1)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$3.37
Market cap:	US$133m
Market	NYSE MKT

Share price graph (US$)



Company description

VolitionRx is a life sciences company developing novel, simple-to-use, blood-based tests to diagnose a broad range of cancers and other conditions by identifying and measuring nucleosomes in the blood stream. The primary focus is to develop the Nu.Q family of blood-based diagnostics tests for colorectal cancer.

Price performance

%	1m	3m	12m
Actual	11.6	(2.6)	56.7
Relative*	6.6	(6.0)	45.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

VolitionRx (VNRX)

INVESTMENT SUMMARY

VolitionRx's proprietary Nu.Q technology detects the level and structure of nucleosomes in the blood using one drop of blood serum. It is currently focused on colorectal (CRC) and lung cancers based on the most recent published proof of concept data from studies with clinical-grade Nu.Q assays. Following the proof of concept data, Volition together with the National Taiwan University will conduct a large-scale lung cancer study. During its recent capital markets day, Volition also provided more details about the most recent expansion into veterinary space (MoU signed with the Texas A&M University) and development of the so-called Nu.Q Capture technology, which investigates the use of Nu.Q to purify or enrich tumour-associated nucleosomes. As of end-Q119, Volition has $16.2m in cash, and post-period has benefited from the exercise of warrants totaling $5m.

INDUSTRY OUTLOOK

The blood-based cancer screening market is in its nascent stages with great potential and serves an unmet medical need. Currently there are few, if any, non-invasive screening methods for the vast majority of cancers.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(15.0)	(15.1)	(57.29)	N/A	N/A
2018	0.0	(17.9)	(18.0)	(48.67)	N/A	N/A
2019e	0.1	(18.2)	(18.3)	(46.40)	N/A	N/A
2020e	0.1	(19.6)	(19.7)	(47.94)	N/A	N/A

Company coverage

Company	Note	Date published
Acacia Pharma	Update; Update	27/02/2019; 11/07/2019
Acarix	Update; Update	14/03/2019; 22/05/2019
Actinogen Medical	Initiation; Flash	18/03/2019; 08/05/2019
ADL Bionatur Solutions	Flash; Update	09/05/2019; 23/05/2019
AFT Pharmaceuticals	Update; Update	28/05/2019; 10/07/2019
ASIT biotech	Update; Update	03/04/2019; 17/05/2019
Atossa Genetics	Outlook; Update	07/12/2018; 09/05/2019
Auris Medical Holding	Update; Update	21/03/2019; 04/06/2019
Australis Capital	Initiation	31/05/2019
Avacta Group	Initiation	13/06/2019
Basilea Pharmaceutica	Update; Update	10/01/2019; 06/03/2019
BioPorto Diagnostics	Update; Update	27/02/2019; 20/05/2019
BONESUPPORT	Update; Update	20/03/2019; 14/06/2019
Brighter	Update; Update	05/03/2019; 13/06/2019
Cantargia	Update; Update	08/03/2019; 13/06/2019
Carmat	Update; Update	21/12/2017; 26/10/2018
CASI Pharmaceuticals	Update; Update	03/04/2019; 26/04/2019
Clal Biotechnology Industries	Update; Update	15/04/2019; 19/06/2019
Deinove	Outlook; Update	14/03/2019; 25/04/2019
Destiny Pharma	Update; Update	25/02/2019; 11/04/2019
Elbit Medical Technologies	Update; Update	06/12/2018; 30/04/2019
Herantis Pharma	Initiation; Update	20/09/2018; 06/03/2019
Hutchison China Meditech	Outlook; ADR Outlook	05/07/2019; 05/07/2019
Immunicum	Update; Outlook	19/11/2018; 27/06/2019
Immutep	Update; ADR Update	02/07/2019; 02/07/2019
InMed Pharmaceuticals	Update; Update	14/02/2019; 22/05/2019
International Stem Cell	Update; Update	01/05/2019; 05/06/2019
Kazia Therapeutics	ADR Outlook; Outlook	21/06/2019; 23/06/2019
MagForce	Update; Outlook	03/07/2019; 09/07/2019
Medigene	Update; Outlook	04/01/2019; 19/06/2019
Mesoblast	Update; Update	07/06/2017; 07/11/2017
MGC Pharmaceuticals	Update; Update	01/03/2019; 10/07/2019
Mologen	Outlook; Update	21/09/2018; 04/01/2019
NetScientific	Update; Update	24/10/2018; 30/11/2018
NeuroVive Pharmaceutical	Update; Update	04/04/2019; 12/06/2019
Newron Pharmaceuticals	Outlook; Update	14/03/2019; 31/05/2019
Nuevolution	Outlook; Update	19/03/2019; 29/05/2019
Oncology Venture	Update; Outlook	09/04/2019; 12/06/2019
Onxeo	Update; Update	27/04/2018; 27/11/2018
OpGen	Initiation; Update	15/04/2019; 20/05/2019
Orexo	Update; Update	08/05/2019; 15/07/2019
Oryzon Genomics	Update; Update	29/04/2019; 18/06/2019
OSE Immunotherapeutics	Initiation; Update	06/12/2018; 17/04/2019
Oxford BioMedica	Outlook; Flash	04/06/2019; 26/06/2019
Pacific Edge	Update; Update	07/01/2019; 10/06/2019
Paion	Update; Outlook	01/04/2019; 14/05/2019

PDL BioPharma	Update; Update	16/04/2019; 15/05/2019
Photocure	Update; Update	28/05/2019; 08/07/2019
Pixium Vision	Outlook; Flash	12/04/2019; 02/05/2019
Quantum Genomics	Update; Update	01/04/2019; 13/06/2019
RedHill BioPharma	Update; Update	28/05/2019; 11/07/2019
ReNeuron Group	Update; Update	20/05/2019; 17/07/2019
RhoVac	Initiation	28/05/2019
ROVI Laboratorios Farmaceuticos	Flash; Update	19/03/2019; 10/05/2019
Selvita	Outlook; Update	17/01/2019; 08/04/2019
Shield Therapeutics	Update; Update	04/03/2019; 03/04/2019
Sunesis Pharmaceuticals	Outlook; Update	22/03/2019; 24/06/2019
SymBio Pharmaceuticals	Outlook; ADR Outlook	17/04/2019; 18/04/2019
Targovax	Update; Update	12/03/2019; 11/07/2019
Telix Pharmaceuticals	Update; Outlook	31/10/2018; 03/04/2019
Therapix Biosciences	Update; Update	18/08/2017; 17/11/2017
Transgene	Update; Update	30/11/2018; 27/03/2019
VolitionRx	Update; Outlook	29/11/2018; 14/05/2019

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