EDISON

Edison Healthcare Insight

March 2019

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The Edison healthcare team

Maxim Jacobs

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

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.

Briana Warschun

Briana received her Master of Science in Biomedical Engineering from Brown University in May 2017. Before that, she received a BS in Biomedical Engineering with a minor in Biophysics from George Washington University. While pursuing her education, Briana gained work experience through internships at the medtech behemoth C.R. Bard as well as at the healthcare consulting firm The Advisory Board Company.

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

Dr Andy Smith

Andy joined the Healthcare team at Edison in November 2017 after a period as a senior principal in ICON's 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 Guy's 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 Master's in Bioscience Enterprise course at the University of Cambridge.

Dr Daniel Wilkinson

Daniel joined Edison's Healthcare team in January 2016. He spent four years at Imperial College London, where he undertook both a Master's 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 Edison's 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 King's 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.

Sean Conroy

Sean joined Edison's 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.

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Prices at 15 March 2019

Published 22 March 2019

Welcome to the March edition of the Edison Healthcare Insight. In this edition we have profiled 62 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 15 March

US$/£ exchange rate: 0.7543
€/£ exchange rate: 0.8532
C$/£ exchange rate: 0.5862
A$/£ exchange rate: 0.5326
NZ$/£ exchange rate: 0.5151
SEK/£ exchange rate: 0.0810
DKK/£ exchange rate: 0.1143
NOK/£ exchange rate: 0.0879
JPY/£ exchange rate: 0.0068
NIS/£ exchange rate: 0.2100
CHF/£ exchange rate: 0.7511

Sector: Pharma & healthcare

Price:	€1.60
Market cap:	€85m
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	8.8	2.6	(55.3)
Relative*	6.7	(4.6)	(51.5)

* % 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 (CINV). Acacia's lead product BARHEMSYS (repurposed amisulpride for the management of PONV) has been resubmitted to the FDA following receipt of a CRL (in October) relating to deficiencies at the contract manufacturer. The FDA has set a Prescription Drug User Fee Act (PDUFA) goal to review the class 2 resubmission by 5 May 2019, but we highlight this could be delayed by the US government shutdown. We still anticipate a US launch of BARHEMSYS in Q219 for PONV 'rescue treatment' and expect broadening of use for PONV prophylaxis in subsequent years. As of 31 December, Acacia had net cash of £22.1m.

INDUSTRY OUTLOOK

Inadequately treated PONV leads to prolonged stay in post-anaesthesia care unit (PACU) recovery rooms. BARHEMSYS use 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	1.1	(43.7)	(46.0)	(0.83)	N/A	N/A
2020e	13.5	(39.2)	(41.7)	(0.76)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK4.00
Market cap:	SEK92m
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	(14.9)	(30.3)	(52.4)
Relative*	(16.1)	(36.2)	(53.7)

* % Relative to local index

Analyst

Dr John Savin

Acarix (ACARIX)

INVESTMENT SUMMARY

Acarix is in a market development phase; FY18 results show CADScor sales of SEK1m. The application for German public reimbursement is underway; more news is expected in May 2019. 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 and so avoids complex and costly further testing in 50% of cases. Acarix 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$0.06
Market cap:	A$63m
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 neurodegenerative and metabolic diseases. The primary indication is mild AD, and results from the ongoing Phase II XanADu trial are expected Q219.

Price performance

%	1m	3m	12m
Actual	1.8	16.7	12.0
Relative*	(0.1)	5.7	7.8

* % Relative to local index

Analyst

Dr Jonas Peciulis

Actinogen Medical (ACW)

INVESTMENT SUMMARY

Actinogen Medical is an ASX-listed Australian biotech developing its lead asset Xanamem to treat cognitive impairment that occurs in chronic neurodegenerative diseases. Xanamem® is a selective 11beta-HSD1 inhibitor that is able to cross the blood-brain barrier and target excess brain cortisol, which has been associated with cognitive impairment in Alzheimer's disease (AD). The ongoing Phase II XanADu trial is fully enrolled with mild AD patients, who receive Xanamem in conjunction with standard of care. The results are due by end-Q219 and will shape further development of Xanamem. Actinogen had cash of A$15.5m at the end of fiscal H119 (end of calendar 2018) which is sufficient to finish the XanADu study, additional studies and prepare for Phase III trials.

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	4.0	(10.2)	(10.1)	(1.0)	N/A	N/A
2020e	3.0	(7.5)	(7.5)	(0.7)	N/A	N/A

Sector: Pharma & healthcare

Price:	€1.98
Market cap:	€78m
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	(2.9)	14.5	(16.1)
Relative*	(5.2)	8.9	(13.0)

* % Relative to local index

Analyst

Pooya Hemami

ADL Bionatur Solutions (BNT)

INVESTMENT SUMMARY

ADL Bionatur Solutions (ADL-BS) provides contract manufacturing of fermentation-based biochem products and antibiotics, and also develops and licenses its own portfolio of OTC and prescription animal health products, including probiotics and vaccines. ADL will have 2,400m3 of total fermentation capacity available by mid-2019. While this operated at c 40% utilisation in H118, given recent contract wins and the ramping up in 2019 of two largest contracts (a six-year €146m flucosil-lactose deal and an arrangement with Amyris), ADL-BS expects to have 85% of capacity in use 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 the unit's generation of at least €55m in 2019 revenue (vs €12m in 2017). ADL-BS reported H118 net debt of €41.2m, and we estimate year-end 2018 net debt of approximately €45.4m (including a €7.0m loan from its majority shareholder).

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	14.6	(10.4)	(13.7)	(64.2)	N/A	N/A
2018e	27.8	(9.2)	(13.3)	(35.5)	N/A	46.1
2019e	64.8	5.7	1.2	3.1	63.9	N/A

Sector: Pharma & healthcare

Price:	NZ$2.06
Market cap:	NZ$200m
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	0.5	(6.4)	(17.6)
Relative*	(1.3)	(13.2)	(23.9)

* % Relative to local index

Analyst

Maxim Jacobs

AFT Pharmaceuticals (AFT)

INVESTMENT SUMMARY

AFT Pharmaceuticals is a New Zealand-based specialty pharmaceutical company that currently sells 130 prescription specialty generics and OTC products through its own sales force in New Zealand, Australia and South-East Asia and has been expanding its geographic footprint. Maxigesic, its combination acetaminophen/ibuprofen product addressing a $10.4b market, is currently sold and launched in 15 countries with distribution agreements in place in a total of 128. Additionally, AFT is expecting its first approval for Maxigesic IV in mid-2019, is preparing to file in multiple countries, with a filing in the US expected by the end of calendar 2019. AFT is also developing a handheld device called SURF Nebuliser, which is able to deliver therapies intranasally, with a main focus on the $3 billion conscious sedation market.

INDUSTRY OUTLOOK

AFT is a multi product company targeting pharmacy prescription, OTC and hospital markets. Data for Maxigesic offers 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)
2017	69.2	(15.1)	(18.5)	(19.12)	N/A	N/A
2018	80.1	(10.5)	(12.9)	(13.30)	N/A	N/A
2019e	91.2	1.6	(2.2)	(2.20)	N/A	263.4
2020e	109.5	11.9	10.0	10.31	20.0	21.9

Sector: Pharma & healthcare

Price:	€1.46
Market cap:	€28m
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	30.4	(25.1)	(62.1)
Relative*	27.8	(30.4)	(58.8)

* % 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 and earlier-stage programs in house dust mite (hdm-ASIT+) and in peanut allergies (pnt-ASIT+). 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+ has started and results are expected after the pollen season of 2019. We expect ASIT Biotech to self-market gp-ASIT+ in Europe and outlicense all other rights in ex-Europe. ASIT recently raised money to fully-fund its clinical programs.

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 four-dose regimen, ASIT could expect some usage in the less-severe segment where currently a regimen of many doses does not balance the risk-benefit.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	0.0	(12.0)	(12.0)	(93.60)	N/A	N/A
2018e	0.0	(13.8)	(13.8)	(82.61)	N/A	N/A
2019e	0.0	(9.7)	(9.5)	(51.71)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$3.51
Market cap:	US$20m
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	132.5	185.4	(42.6)
Relative*	128.6	162.9	(44.2)

* % 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 oral endoxifen as a potential treatment for breast cancer patients refractory to tamoxifen. About 20-25% of the 1.0m women taking tamoxifen worldwide develop resistance to it, and have an increased risk for cancer recurrence. The firm reported positive Phase I data for both formulations, including results showing that patients obtain "steady state" serum endoxifen levels after about 7 days of daily oral dosing.

INDUSTRY OUTLOOK

Atossa started Phase II trials for oral and topical endoxifen in women, and completed enrollment for the topical study. It is also planning to start a Phase II study in men with gynecomastia. It also started preclinical studies with its IDMC to explore potential use in immunotherapy. Atossa reported $13.0m net cash on 30 September 2018, which we believe can sustain operations until early 2020.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.0	(6.9)	(7.3)	(2951.72)	N/A	N/A
2017	0.0	(7.1)	(7.2)	(1000.81)	N/A	N/A
2018e	0.0	(12.9)	(12.9)	(430.82)	N/A	N/A
2019e	0.0	(11.7)	(11.7)	(188.22)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.38
Market cap:	US$14m
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	2.0	(12.6)	(75.3)
Relative*	0.3	(19.5)	(76.0)

* % 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. Following positive Phase I data where their formulation demonstrated superior bioavailability to the oral version, Auris expects to initiate its Phase II clinical trial in 138 patients with surgically-induced acute vertigo in Q119. Auris is also developing AM-201, an intranasal betahistine formulation, for co-administration with olanzapine to counteract adverse effects, especially weight gain.

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)	(53.60)	N/A	N/A
2018	0.0	(11.0)	(12.0)	(72.04)	N/A	N/A
2019e	0.0	(11.3)	(11.6)	(58.26)	N/A	N/A
2020e	0.0	(16.5)	(17.5)	(84.49)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF48.56
Market cap: CHF577m
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	(4.1)	9.3	(27.2)
Relative*	(6.6)	0.4	(31.8)

* % Relative to local index

Analyst

Dr Susie Jana

Basilea Pharmaceutica (BSLN)

INVESTMENT SUMMARY

Basilea has two approved hospital-based products: Cresemba (severe mold infections) and Zevtera (bacterial infections). Multiple licensing/distribution agreements are in place for Cresemba and Zevtera, which should drive top-line growth; revenues from these anti-infectives were up 56% y-o-y (FY18 CHF82m) and in February a $5m sales milestone was triggered from Pfizer, which markets Cresemba in Europe (ex Nordics) and other territories. US Phase III registration trials have initiated 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 for intrahepatic cholangiocarcinoma that reported promising interim data in January. A Phase I/II study for derazantinib in patients with advanced urothelial cancer is expected to initiate mid-2019, using both a monotherapy and a 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	27.6
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: DKK4.03
Market cap: DKK668m
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	1.8	4.7	16.3
Relative*	(1.3)	(2.9)	14.5

* % 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 is currently completing pivotal clinical trials for adults in plasma and for children in urine. Two 510(k)'s will 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	(40.7)	(40.7)	(20.98)	N/A	N/A
2020e	53.7	(46.2)	(46.4)	(22.80)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK21.35
Market cap:	SEK1105m
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	6.8	9.3	37.6
Relative*	5.3	0.0	33.7

* % 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 signed up more than 30 distributors in its own independent network 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 plans to drive sales in trauma.

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	(174.4)	(174.9)	(346.09)	N/A	N/A
2019e	199.9	(142.1)	(142.3)	(273.73)	N/A	N/A
2020e	298.9	(80.2)	(80.6)	(151.95)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK9.15
Market cap:	SEK682m
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	(28.3)	5.1	10.6
Relative*	(29.3)	(3.9)	7.6

* % 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	(52.8)	(57.7)	(76.78)	N/A	N/A
2020e	24.5	(38.5)	(43.7)	(57.51)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK16.40
Market cap: SEK1085m
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	10.8	2.5	105.0
Relative*	9.3	(6.2)	99.3

* % 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. So far, Nidanilimab was found to be safe and well tolerated in the Phase I part of the study, and the first patient has been treated in the Phase II part. 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 unexpected results from its six-year Phase III cardiovascular outcomes study in heart attack patients. Cantargia has recently up-listed to the Nasdaq Stockholm main market.

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 (fd) (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)	(142.88)	N/A	N/A
2020e	0.0	(117.8)	(117.8)	(178.01)	N/A	N/A

Sector: Pharma & healthcare

Price: €22.50
Market cap: €210m
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	2.0	(0.9)	9.2
Relative*	(2.6)	(10.7)	7.9

* % 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. The second cohort of patients is being enrolled in the trial.

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

Sector: Pharma & healthcare

Price:	US$3.25
Market cap:	US$304m
Market	NASDAQ

Share price graph (US$)

Company description

CASI is a pharmaceutical company that has acquired or licensed a series of drugs that it intends to market in China. These include proprietary drugs licensed from Spectrum Pharmaceuticals and a portfolio of ANDAs. The goal is to seek approval through new pathways that have been opened in the quickly changing Chinese regulatory environment.

Price performance

%	1m	3m	12m
Actual	(9.7)	(23.5)	1.2
Relative*	(11.2)	(29.6)	(1.4)

* % Relative to local index

Analyst

Dr Nathaniel Calloway

CASI Pharmaceuticals (CASI)

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 also intends to establish manufacturing in China for select products from its portfolio of ANDAs, which should also expedite approval under the new regulatory regime.

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)
2016	0.0	(6.4)	(6.5)	(11.56)	N/A	N/A
2017	0.0	(10.0)	(10.1)	(16.45)	N/A	N/A
2018e	0.0	(18.4)	(18.8)	(22.61)	N/A	N/A
2019e	10.9	(9.8)	(14.3)	(15.01)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS2.85
Market cap:	NIS460m
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	(2.3)	(9.7)	(4.7)
Relative*	(2.3)	(10.5)	(8.9)

* % Relative to local index

Analyst

Maxim Jacobs

Clal Biotechnology (CBI)

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 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)
2016	30.5	(434.8)	(454.1)	(289.34)	N/A	N/A
2017	73.6	(103.3)	(54.2)	(15.02)	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:	€1.69
Market cap:	€27m
Market	Euronext Growth

Share price graph (€)

Company description

Deinove is a biotech company that discovers, develops and manufactures compounds of industrial interest stemming from rare bacteria and intended for the health, nutrition and beauty markets.

Price performance

%	1m	3m	12m
Actual	12.7	9.0	(58.4)
Relative*	7.5	(1.7)	(58.9)

* % 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. 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. The company raised €8.5m in 2018 and renewed the equity line with Kepler Cheuvreux 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)
2016	0.8	(6.4)	(7.7)	(72.59)	N/A	N/A
2017	0.2	(8.5)	(9.7)	(67.69)	N/A	N/A
2018e	0.7	(9.0)	(10.1)	(62.19)	N/A	N/A
2019e	1.1	(12.0)	(13.3)	(68.98)	N/A	N/A

Sector: Pharma & healthcare

Price:	75.5p
Market cap:	£33m
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	(9.0)	7.1	(40.8)
Relative*	(9.4)	0.7	(41.1)

* % 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 to at least 2020, with Phase IIb results for XF-73 available at 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)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	0.0	(2.5)	(3.2)	(8.45)	N/A	N/A
2018e	0.0	(6.8)	(7.3)	(14.28)	N/A	N/A
2019e	0.5	(8.3)	(8.3)	(15.29)	N/A	N/A

Sector: Pharma & healthcare

Price:	4.6p
Market cap:	£12m
Market	AIM

Share price graph (p)

Company description

e-Therapeutics is a UK-based drug discovery company that has developed a proprietary network-driven drug discovery platform that has generated pre-clinical licensing opportunities.

Price performance

%	1m	3m	12m
Actual	(12.4)	(31.9)	(47.4)
Relative*	(12.7)	(35.9)	(47.7)

* % Relative to local index

Analyst

Andy Smith

e-Therapeutics (ETX)

INVESTMENT SUMMARY

e-Therapeutics (ETX) offers investors exposure to a proprietary, cutting-edge in silico network-driven drug discovery (NDD) platform that has already attracted significant investment and has been fully operational since 2014. This second-generation platform has generated two new chemical entities in immunoncology that are the subject of business development efforts and have achieved commercial validation through the deal with Novo Nordisk. ETX's priority is securing further partnerships to provide external validation and it has recently signed deals to enhance the NDD platform with AI and a discovery deal with C4XD. ETX's strength is in complex disease networks such as cancer.

INDUSTRY OUTLOOK

Network-driven approaches could revolutionise drug discovery and shorten the path to market by minimising technical risks and drug development costs. ETX is differentiated from its competitors through its expertise in curating, processing and analysing data in the context of the mechanistic modelling of disease.

Y/E Jan	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2018	0.0	(6.7)	(6.7)	(2.0)	N/A	N/A
2019	0.0	(5.1)	(5.1)	(1.51)	N/A	N/A
2020e	0.5	(3.5)	(3.5)	(0.9)	N/A	N/A
2021e	0.0	(3.0)	(3.0)	(0.8)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS0.93
Market cap:	NIS216m
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	(1.9)	(9.7)	(17.6)
Relative*	(1.9)	(10.5)	(21.2)

* % 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 (~11%), which is developing 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. 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)
2016	0.0	(0.6)	(3.7)	0.0	N/A	N/A
2017	0.0	(0.7)	(5.2)	0.0	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: €5.50
Market cap: €27m
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	1.9	2.8	(8.3)
Relative*	(0.6)	(6.4)	(9.2)

* % 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 and positive efficacy/safety data from ongoing proof-of-concept clinical trials expected in 2019–20 would serve as validation of the research efforts and additionally could crystallise value through partnering opportunities for these unique assets.

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: 4225.0p
Market cap: £2816m
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	8.8	(19.8)	(14.0)
Relative*	8.4	(24.6)	(14.5)

* % Relative to local index

Analyst

Dr Susie Jana

Hutchison China MediTech (HCM)

INVESTMENT SUMMARY

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. Following China registration approval from the National Medicinal Products Administration of China for the treatment of CRC (3L), commercial marketing of fruquintinib (Elunate) commenced in November 2018 (through partner Eli Lilly). HCM has also announced several new partnerships and plans to combine its antiangiogenic TKIs (surufatinib and fruquintinib) with immune checkpoint inhibitors (PD-1 antibodies), with a view to developing a best-in-class combination therapy for the treatment of solid tumours. At 31 December, HCM had net cash of $274.2m. After failing to reach the primary endpoint in the Phase III FALUCA trial, our valuation of HCM is under review.

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 China and international oncology company.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2016	216.1	(44.3)	(47.4)	19.6	280.4	N/A
2017	241.2	(50.7)	(53.5)	(43.3)	N/A	N/A
2018e	162.5	(94.8)	(99.5)	(109.5)	N/A	N/A
2019e	180.1	(113.9)	(120.1)	(139.4)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK8.20
Market cap:	SEK757m
Market	OMX

Share price graph (SEK)

Company description

Immunicum is a clinical-stage immunoncology company based in Stockholm, Sweden. The company is developing an allogeneic dendritic cell immune primer for use in combination with tyrosine kinase inhibitors and checkpoint inhibitors in multiple solid tumour indications.

Price performance

%	1m	3m	12m
Actual	0.0	5.5	24.2
Relative*	(1.4)	(3.4)	20.8

* % Relative to local index

Analyst

Dr Jonas Peciulis

Immunicum (IMMU)

INVESTMENT SUMMARY

Immunicum is a NASDAQ Sweden-listed, clinical-stage immunoncology (IO) company that is developing allogeneic dendritic cell (DC) technologies. Its first clinical product, ilixadencel, is in Phase I and II combination studies in several solid tumour indications. Three studies are expected to render results in 2019. The first is the Phase II MERECA data in renal cell carcinoma (in combination with sunitinib). Interim data from the Phase I/II multi-indication ILIAD study where ilixadencel is being tested in combination with a checkpoint inhibitor (CPI) are also expected in H219 and Merck KgaA and Pfizer have entered into a collaboration and supply agreement on their CPI. In addition, the topline data from the ongoing Phase I/II trial in gastrointestinal stromal tumours (GIST) are expected to be announced in mid-2019. Immunicum completed a SEK351m (gross) combined stock issue in Q418.

INDUSTRY OUTLOOK

IO is a frenetic pharmaceutical development area with many clinical combination studies being conducted by big pharmaceutical companies. Investors may not need to wait until 2019 for price-moving events depending on the announcements on the start of their combination studies.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.0	(80.6)	(80.3)	(309.0)	N/A	N/A
2018	0.0	(97.8)	(97.9)	(190.0)	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:	SEK178.00
Market cap:	SEK3083m
Market	NASDAQ OMX First North

Share price graph (SEK)

Company description

Immunovia is a Swedish company, developing antibody microarray (IMMray) diagnostics for oncology and autoimmune diseases. Tests will be run by in-house laboratories. Its lead test is IMMray PanCan-d to detect early stage pancreatic cancer.

Price performance

%	1m	3m	12m
Actual	17.6	23.4	75.5
Relative*	15.9	13.0	70.7

* % Relative to local index

Analyst

Dr John Savin

Immunovia (IMMUNOV)

INVESTMENT SUMMARY

In 2019 Immunovia will focus on preparations for the commercialisation of its IMMray PanCan-d test. This aims to detect cases of early-stage pancreatic cancer in high-risk families. A study of sample optimisation will take until the end of May. This opens the route to verification and validation studies and to the launch in the EU and US of a private testing service, probably in Q120, with a timing update due in late April. Tests will be run in two in-house labs in the US and Sweden. Cash at the end of FY18 was SEK447m after a cash outflow of SEK110m.

INDUSTRY OUTLOOK

The necessary prospective validation study (PANFAM-1, 2,000 people) is on track to complete in H120. Immunovia aims to gain reimbursement from this study. The company aims to reach SEK250–300m in turnover in 2022 from self-pay and SEK800–1,000m in 2024 after reimbursement. There are major but earlier-stage test opportunities in type II diabetes, early-stage pancreatic cancer symptoms, lung cancer and rheumatoid arthritis.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2017	0.2	(44.3)	(45.2)	(267.0)	N/A	N/A
2018	1.1	(84.9)	(86.5)	(467.0)	N/A	N/A
2019e	0.7	(85.8)	(88.8)	(453.0)	N/A	N/A
2020e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.03
Market cap:	A$115m
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	13.3	3.0	30.8
Relative*	11.2	(6.6)	25.8

* % Relative to local index

Analyst

Dr Dennis Hulme

Immutep (IMM)

INVESTMENT SUMMARY

Immutep has three promising candidates in clinical trials and one preclinical asset, all based on Lymphocyte activation gene-3, LAG-3 (one partnered with GSK and a second partnered with Novartis). Lead in-house LAG-3 product, eftilagimod alpha (efti), is being developed in metastatic breast cancer combined with chemo (193 of 226 patients recruited in randomised Phase IIb, topline PFS data expected Q419) 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 commenced three Phase 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 data H219). A trial of efti plus Bavencio in collaboration with Merck KGaA/Pfizer is planned for H119.

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)	(14.9)	(0.5)	N/A	N/A

Sector: Pharma & healthcare

Price:	C$0.57
Market cap:	C$98m
Market	TSX

Share price graph (C$)

Company description

InMed is a biopharmaceutical company focused on manufacturing and developing cannabinoids. Its platform may be able to produce cannabinoids for less cost and with improved purity compared to currently used methods. The company is developing a pipeline, including INM-750 for epidermolysis bullosa, a serious, debilitating orphan indication.

Price performance

%	1m	3m	12m
Actual	(6.6)	34.1	(61.5)
Relative*	(8.3)	21.3	(62.6)

* % 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-750 for epidermolysis bullosa (EB), a serious orphan indication, and expects to file a CTA for INM-750 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	(8.5)	(8.0)	(4.64)	N/A	N/A
2020e	0.0	(13.2)	(13.0)	(7.28)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.49
Market cap:	US$10m
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	0.7	(3.9)	(0.7)
Relative*	(1.0)	(11.5)	(3.3)

* % Relative to local index

Analyst

Maxim Jacobs

International Stem Cell (ISCO)

INVESTMENT SUMMARY

International Stem Cell (ISCO) is an early-stage cell therapy company in Phase I/IIa clinical trials to treat Parkinson's disease (PD), and recently completed dosing of the second patient in their third cohort (a total of 10 so far). Updated data were recently released and indicated that off-time percentage decreased an average of 49% for the second cohort at six months post-transplantation. Also, with its hpSC technology, ISCO has created 15 stem cell lines, each of which is a different HLA type. From this, it creates different cell types such as liver cells, neural cells and three-dimensional eye structures. Sales of its biomedical business were up 112.8% in Q318 to $2.8m.

INDUSTRY OUTLOOK

ISCO's technology platform is based on human parthenogenetic stem cells (hpSCs). Parthenogenetic stem cells are created from unfertilized 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)
2016	7.2	(4.5)	(4.9)	(152.07)	N/A	N/A
2017	7.5	(4.6)	(4.9)	(118.86)	N/A	N/A
2018e	11.5	(2.8)	(3.2)	(50.00)	N/A	N/A
2019e	13.5	(5.9)	(7.0)	(104.69)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.55
Market cap:	A$34m
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	20.9	42.9	(26.7)
Relative*	18.6	29.5	(29.4)

* % Relative to local index

Analyst

Dr Dennis Hulme

Kazia Therapeutics (KZA)

INVESTMENT SUMMARY

Kazia Therapeutics is developing two groups of anti-cancer compounds, including GDC-0084, a PI3K inhibitor licensed from Genentech that has been granted orphan designation in the US for glioblastoma. It began recruitment in a US-based Phase II programme for GDC-0084 in Q118; an initial Phase IIa dose-optimisation study (preliminary data expected Q219) will be followed by a randomised Phase IIb trial in 224 first-line glioblastoma patients. It will also investigate GDC-0084 in breast cancer brain metastases (in collaboration with Dana Farber) and in the childhood brain cancer DIPG (with St Jude Hospital). The Phase I trial of its third-generation benzopyran drug Cantrixil in ovarian cancer has identified the MTD and is recruiting a 12-patient expansion cohort to further explore safety and potential efficacy. While the primary aim of the dose escalation phase was to assess safety and tolerability, we note that 3/5 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)	(22.81)	N/A	N/A
2018	13.0	(4.9)	(6.3)	(12.48)	N/A	N/A
2019e	3.1	(10.5)	(11.9)	(21.92)	N/A	N/A
2020e	12.3	(1.9)	(3.2)	(5.32)	N/A	N/A

Sector: Pharma & healthcare

Price:	€5.43
Market cap:	€143m
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	(2.3)	(3.9)	(14.6)
Relative*	(5.6)	(10.6)	(9.8)

* % 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 NanoTherm nanoparticle-based therapy for cancer. MagForce has three centres in Germany that are commercially capable of treating glioblastoma patients. To accelerate uptake in Europe, MagForce is expanding from Germany into other countries with a loan of up to €35m from the European Investment Bank. Installation of the first device in Lublin, Poland has been achieved, with further expansion anticipated in 2019. In the US, its subsidiary MagForce USA has initiated a pivotal clinical trial for prostate cancer. Proceeds from the MagForce USA capital increase ($9m gross) in August 2018 will finance the trial to completion, with commercial treatments potentially starting early-2020 (following regulatory approval).

INDUSTRY OUTLOOK

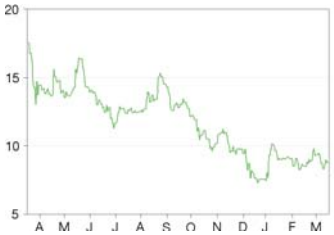
MagForce's NanoTherm therapy has been designed to directly affect tumours from within, while sparing surrounding healthy tissue. Magnetic nanoparticles are directly injected into a tumour and are then heated in the presence of an external magnetic field generated by specialist equipment (NanoActivator). This can destroy or sensitise the tumour for additional treatment.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.5	(6.6)	(7.2)	(27.8)	N/A	N/A
2017	0.7	(6.7)	(7.5)	(28.3)	N/A	N/A
2018e	0.3	(10.2)	(11.4)	(43.2)	N/A	N/A
2019e	5.8	(7.8)	(9.1)	(34.4)	N/A	N/A

Sector: Pharma & healthcare

Price:	€8.84
Market cap:	€217m
Market	FRA

Share price graph (€)



Company description

Medigene is a German biotech company with a core business in 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	4.1	15.9	(50.0)
Relative*	0.6	7.8	(47.1)

* % 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 (TAB). A Phase II study is ongoing with DC vaccines for acute myeloid leukaemia. For TCRs, Medigene has initiated its first company-led trial with MDG1011 in patients with PRAME expressing AML, MDS or MM. Its partnership with bluebird bio to utilise its TCR technology platform was expanded in 2018 (US$8m one time payment, US$1m achieved milestone payment, US$250 milestones per target, tiered royalties) to now include six therapeutic candidates. Medigene is well-funded to execute its clinical programme, as of 31st December gross cash (including time deposits) was €71.4m. We note as a result of the FREP decision we have pulled our forecast and historic financial results and await the disclosure of full accounts at the FY18 results.

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)
2018	N/A	N/A	N/A	N/A	N/A	N/A
2019	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
2021e	N/A	N/A	N/A	N/A	N/A	N/A

Sector: Pharma & healthcare

Price:	A$1.27
Market cap:	A$633m
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	9.0	11.4	(24.4)
Relative*	7.0	1.0	(27.3)

* % 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 expects to file a BLA in this indication in Q219. 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 approximately 12 months. The company expects to meet with the FDA in H119 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$0.04
Market cap:	A$46m
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	(5.0)	(5.0)	(59.6)
Relative*	(6.8)	(13.9)	(61.1)

* % Relative to local index

Analyst

Dr Dennis Hulme

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. In December it imported the first shipment of GMP-certified CannEpil into Australia, where it can be prescribed as an investigational medicinal product under an authorisation received from the Therapeutic Goods Administration. 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. In January MGC completed the sale of its MGC Derma cannabis-based cosmetics business to Cannaglobal in exchange for a 10% equity interest in CannaGlobal and a five-year exclusive supply agreement.

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)	(0.88)	N/A	N/A
2018	0.3	(8.9)	(9.0)	(0.80)	N/A	N/A
2019e	2.3	(5.7)	(5.7)	(0.47)	N/A	N/A
2020e	8.9	(6.4)	(6.6)	(0.55)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.97
Market cap:	€30m
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	26.4	8.0	(71.9)
Relative*	22.2	0.4	(70.4)

* % 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 following deal terms that were inferior to those originally agreed. Mologen will now look to out-license lefitolimod after the IMPALA trial to achieve the best possible terms. An agreement with the bond holders for its 2016/2024 and 2017/2025 bonds have been reached. The EGM originally scheduled for the 26 February 2019 has been postponed. We note, Mologen has announced the early departure of its CEO Dr Ignacio Faus with effect from 31st 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:	12.0p
Market cap:	£9m
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	449.2	(57.0)	(77.8)
Relative*	447.3	(59.5)	(77.9)

* % Relative to local index

Analyst

Maxim Jacobs

NetScientific (NSCI)

INVESTMENT SUMMARY

NetScientific has a focused portfolio of potentially disruptive biomedical and healthcare technology investments. The company is focused on digital health, diagnostics and therapeutics with the portfolio consisting of four core investments in which it has controlling stakes (Vortex, Wanda, ProAxsis and Glycotest) and one material investment (PDS). Importantly, Glycotest announced that Fosun Pharma agreed to a $10m investment in Glycotest in exchange for a 40% interest in the company as well as the China rights for Glycotest's hepatocellular carcinoma panel. PDS also recently agreed to merge with Nasdaq-listed Edge Therapeutics. Following a review of strategic alternatives, NetScientific has decided to de-list from the AIM and be a private company going forward.

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: SEK1.42
Market cap: SEK264m
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	(1.4)	15.2	(37.1)
Relative*	(2.8)	5.5	(38.9)

* % Relative to local index

Analyst

Dr Jonas Peciulis

NeuroVive Pharmaceutical (NVP)

INVESTMENT SUMMARY

NeuroVive Pharmaceutical is a mitochondrial medicine specialist. NeuroVive'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 has received positive feedback from the FDA on its NeuroSTAT TBI development plan including the design of the Phase IIb proof-of-concept study. The study is expected to start in 2019. 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 has initiated a Phase Ia/b study in H119. So far in 2019, NeuroVive has raised SEK127.2m and licensed two research compounds from NVP015 programme to Oroboros for €10-15k per annum.

INDUSTRY OUTLOOK

NeuroVive has a diversified portfolio with all assets aimed at improving mitochondrial metabolism and function. This puts NeuroVive among the very few experts in mitochondrial medicine in the industry, in our view.

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	(68.4)	(68.8)	(101.53)	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: CHF8.20
Market cap: CHF146m
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	(6.0)	37.4	(10.4)
Relative*	(8.4)	26.2	(16.1)

* % 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 and in the US by sublicensee US WorldMeds. Royalty income from sales of Xadago rose by 41% (to €4m) y-o-y in FY18 and in November Xadago received marketing approval in Australia (through partners Zambon and Seqirus). 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. Following positive data from a Phase II study of Evenamide, two Phase II/III studies are expected to initiate in Q219, to investigate Evenamide as an add-on to atypical antipsychotics in schizophrenia. As of 31 December, Newron had net cash and short-term investments of €43.9m.

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	8.5	(30.3)	(30.2)	(169.43)	N/A	N/A
2020e	21.6	(8.7)	(8.7)	(48.58)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK12.96
Market cap: SEK642m
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	(2.1)	(17.9)	(24.8)
Relative*	(3.5)	(24.9)	(26.9)

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Nuevolution (NUEV)

INVESTMENT SUMMARY

Nuevolution's proprietary Chemetics DNA-encoded screening platform technology enables fast and accurate small molecule drug discovery. Nuevolution has continued to build and strengthen its pipeline of preclinical assets throughout 2018, which it aims to monetise in the near term via out-licensing deals. The technology has received powerful external validation, including three collaborations (Amgen, Almirall and Janssen) that could generate significant value in the coming years. We expect Nuevolution to see at least one internally generated asset progress into clinical development in the near future. As of 31 December, Nuevolution had net cash of SEK108m.

INDUSTRY OUTLOOK

Significant promise is seen in DNA-encoded libraries due to 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)
2016	21.3	N/A	(151.9)	(4.0)	N/A	N/A
2017	120.3	N/A	(9.4)	(0.6)	N/A	N/A
2018e	11.5	N/A	(109.0)	(2.2)	N/A	N/A
2019e	196.4	N/A	75.3	1.0	1296.0	9.6

Sector: Pharma & healthcare

Price: SEK5.04
Market cap: SEK254m
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	(24.8)	(29.0)	(54.8)
Relative*	(25.8)	(35.0)	(56.1)

* % 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 identify and in-license drugs that are active within populations that the DRP can identify. To date, the company has in-licensed six drugs and is in the early stages of validating the platform 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)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	5.1	(23.8)	(31.0)	(127.00)	N/A	N/A
2018e	3.2	(38.4)	(29.2)	(56.99)	N/A	N/A
2019e	1.9	(204.6)	(205.8)	(382.13)	N/A	N/A

Sector: Pharma & healthcare

Price:	€0.89
Market cap:	€47m
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	(2.8)	(1.6)	(39.6)
Relative*	(7.3)	(11.3)	(40.3)

* % 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/II part of the DRIIV-1 trial at the Institut Curie in Paris in patients with advanced solid tumours. 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, a major R&D expansion announced in October 2017, 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	17.5	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:	SEK78.50
Market cap:	SEK2713m
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	8.3	21.9	98.0
Relative*	6.8	11.5	92.5

* % 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 with Humana, among other insurers, 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 other patent cases against Actavis are ongoing. 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	117.2	17.6
2018	783.1	95.8	92.2	399.01	19.7	18.5
2019e	866.7	265.2	252.7	708.38	11.1	14.5
2020e	844.1	176.2	156.6	439.08	17.9	10.7

Sector: Pharma & healthcare

Price: €3.68
Market cap: €144m
Market Madrid Stock Exchange

Share price graph (€)

Company description

Oryzon Genomics is a Spanish biotech focused on epigenetics. Iadademstat (ORY-1001, Phase IIa) is being explored for acute leukaemias and SCLC; Vafidemstat (ORY-2001) is in Phase IIa for AD, MS and aggression, and ORY-3001 is being developed for certain orphan indications.

Price performance

%	1m	3m	12m
Actual	(2.9)	43.8	38.3
Relative*	(5.2)	36.7	43.4

* % 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. Oryzon's lead CNS product vafidemstat (ORY-2001), a dual LSD1/MAOB inhibitor, targets Alzheimer's disease (Phase IIa initiated), multiple sclerosis (Phase IIa initiated) and other neurodegenerative indications. Results from both trials are expected in 2019. Oryzon has also initiated a Phase IIa trial studying vafidemstat (ORY-2001) in aggressiveness. The lead oncology product iadademstat (ORY-1001) is a specific LSD1 inhibitor with positive data from the Phase I/IIa in acute myeloid leukaemia (AML) announced in December 2016. A Phase IIa trial in AML and Phase IIa trial in SCLC have recently initiated.

INDUSTRY OUTLOOK

Epigenetics is a relatively young field in terms of drug development. HDACs were among the first epigenetic therapeutics brought to market, and although effective, they have side effects. Oryzon is among the leading clinical stage drug developers with a second generation of epigenetic therapeutics, which have greater selectivity and are expected to show a favourable safety/efficacy profile.

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: €4.15
Market cap: €61m
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	0.7	28.1	14.3
Relative*	(3.9)	15.4	12.9

* % 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 results expected in 2021. In February 2019, a milestone payment was triggered from Servier of €10m and another milestone is expected soon from BI.

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 (fd) (c)	P/E (x)	P/CF (x)
2016	0.4	(6.8)	(6.9)	(30.32)	N/A	76.1
2017	6.7	(12.5)	(12.6)	(72.33)	N/A	N/A
2018e	20.6	0.4	0.8	5.59	74.2	N/A
2019e	0.0	(19.9)	(20.0)	(136.09)	N/A	N/A

Sector: Pharma & healthcare

Price:	693.0p
Market cap:	£458m
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	(0.7)	(2.9)	12.7
Relative*	(1.0)	(8.6)	12.1

* % 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 reported this year are evidence of strong operational momentum and ongoing validation of its business model. On the back of a £19.3m net raise in March, OXB is expanding its manufacturing capabilities to match increasing demand and continued growth of its platform (partnership) revenues. In the near term, revenue will continue to be driven by the Novartis partnership as Kymriah's commercial roll out continues (royalties and manufacturing fees). OXB has several established development and manufacturing partnerships with Bioverativ, Sanofi & Orchard Therapeutics and continues to look to spin-out/out-license its internally developed, preclinical assets. Recently, partner Axovant announced positive but early interim results for AXO-Lenti-PD (in-licensed from OXB) in its ongoing SUNRISE-PD Phase II trial. As of 30 June, OXB had gross cash of £32.2m. We place our forecasts under review.

INDUSTRY OUTLOOK

Cell- and gene-therapy is the focus of much industry attention as it can dramatically alter the outcomes of many diseases. The 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	(1.3)	(11.5)	(14.14)	N/A	N/A
2018	66.8	18.3	5.0	11.61	59.7	48.9
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:	NZ$0.27
Market cap:	NZ$140m
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	(11.3)	(20.3)	(27.6)
Relative*	(12.9)	(26.1)	(33.2)

* % 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 and Australia. The company recently announced results for H119, including 42.7% growth in Cxbladder sales compared to H118. Importantly, in October, the company received notification of the Cxbladder test national reimbursement rate (US$760) from CMS. Once the company receives Local Coverage Determination (LCD), Pacific Edge will be able to get reimbursement for Medicare claims and will enable reimbursement and negotiation for payment on 14,000 tests previously performed on CMS patients. The LCD process is ongoing and once completed will be a major driver of future growth.

INDUSTRY OUTLOOK

Molecular diagnostics is a growing, but increasingly competitive field. Lead time 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)
2017	4.4	(22.3)	(22.4)	(5.9)	N/A	N/A
2018	4.6	(19.5)	(19.6)	(4.5)	N/A	N/A
2019e	5.0	(17.6)	(17.5)	(3.5)	N/A	N/A
2020e	10.2	(13.2)	(13.2)	(2.6)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.20
Market cap:	€140m
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	(0.9)	(3.3)	(8.5)
Relative*	(4.2)	(10.1)	(3.4)

* % Relative to local index

Analyst

Dr Dennis Hulme

Paion (PA8)

INVESTMENT SUMMARY

Paion is moving closer to 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 is on track to file for US approval shortly, after Paion successfully completed clinical development in procedural sedation. R-Pharm plans to file for approval in GA in Russia by end 2019. The primary target 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 reduces total procedure time and should increase throughput. Paion has initiated a Phase III in GA in Europe; full recruitment expected by the end of 2019. Cash of €17.2m at 31 December and anticipated milestone revenue is sufficient to report top-line data from the European Phase III.

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)
2016	4.3	(25.1)	(25.1)	(37.8)	N/A	N/A
2017	5.8	(15.9)	(15.9)	(20.5)	N/A	N/A
2018e	3.1	(13.7)	(13.6)	(17.9)	N/A	N/A
2019e	10.5	(9.4)	(9.4)	(10.2)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$3.55
Market cap:	US$455m
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	6.6	21.6	19.9
Relative*	4.8	12.0	16.7

* % 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 approved drugs to be sold by Noden Pharma. This strategy allows investors to gain exposure in healthcare through a relatively low-risk, diversified vehicle. PDL reported Q318 revenues of $67.9m, up 8.2% compared to Q317 and up 45.8% sequentially, with that growth mainly due to an increase in the fair value of the Assertio (formerly Depomed) royalty rights. Lee's Pharmaceutical Holdings, Noden's partner in China, is expected to launch Tekturna/Rasilez in H119. The company recently announced a $100m stock repurchase plan which could buy back over a quarter of shares outstanding.

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)
2016	244.3	193.1	175.5	77.72	4.6	5.7
2017	320.1	218.8	200.3	81.33	4.4	13.6
2018e	189.4	71.8	66.1	46.11	7.7	N/A
2019e	126.9	31.9	34.9	20.65	17.2	N/A

Sector: Pharma & healthcare

Price:	NOK39.50
Market cap:	NOK861m
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	(14.0)	(8.1)	39.6
Relative*	(15.1)	(12.8)	31.9

* % 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)
2016	143.6	(8.0)	12.8	164.0	24.1	44.2
2017	150.9	(33.1)	(41.6)	(161.0)	N/A	N/A
2018e	184.6	(8.8)	(21.9)	(73.0)	N/A	N/A
2019e	251.0	48.8	35.7	120.0	32.9	34.6

Sector: Pharma & healthcare

Price:	€1.60
Market cap:	€33m
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	(4.2)	(12.3)	(42.6)
Relative*	(8.6)	(20.9)	(43.3)

* % 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 early 2019 and to start an EU pivotal study in H219.

INDUSTRY OUTLOOK

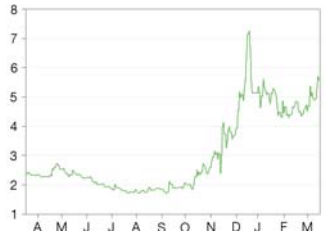
Pixium held €15.6m in gross cash at 31 December 2018, which we estimate will fund operations into Q220. Prima has been designed and being evaluated in clinical studies as a potential treatment option for dry ARMD, a common disease in aging population and a significant unmet medical need.

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:	€5.53
Market cap:	€90m
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	14.1	(22.5)	143.1
Relative*	8.9	(30.2)	140.1

* % 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 firibistat 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 is also launching a Phase IIb in heart failure in Q219 with results expected in H220.

INDUSTRY OUTLOOK

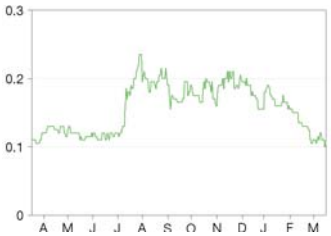
The angiotensin pathway is one of the primary methods of modulating blood pressure and is the target of many anti-hypertensive drugs, including ACE's and ARB's. However, there is a parallel pathway in the brain responsible for the secretion of vasopressin and heart rate that is unaddressed by current 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)
2016	0.0	(6.2)	(6.2)	(59.79)	N/A	N/A
2017	0.0	(10.3)	(10.3)	(92.81)	N/A	N/A
2018e	0.0	(12.6)	(13.1)	(85.58)	N/A	N/A
2019e	0.0	(14.8)	(16.2)	(100.00)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.11
Market cap:	A$23m
Market	ASX

Share price graph (A$)



Company description

Regeneus is a clinical-stage regenerative medicine company developing innovative cell-based therapies for the human & animal health markets.

Price performance

%	1m	3m	12m
Actual	(15.4)	(37.1)	4.8
Relative*	(17.0)	(43.0)	0.8

* % Relative to local index

Analyst

Dr Dennis Hulme

Regeneus (RGS)

INVESTMENT SUMMARY

Regeneus is developing its mesenchymal stem cell technology for musculoskeletal conditions in humans (Progenza) and animals (CryoShot). It has entered a collaboration with AGC for exclusive manufacture of Progenza cells for Japan. Regeneus and AGC have formed a 50:50 JV, which is seeking to sub-license partners to develop and commercialise Progenza in Japan in several indications. In Phase I, Progenza-treated patients experienced clinically meaningful reduction in knee pain and a significant improvement in lateral tibial knee cartilage. Regeneus was granted a US patent in July covering the composition and use of Progenza and it will soon be granted in Europe. Its autologous cancer vaccine RGSH4K was safe and showed encouraging signs of immune stimulation and antitumour activity in a Phase I study. Its Sygenus topical secretions technology improved the appearance of acne in adults in a clinical study and produced better pain relief than morphine in preclinical studies.

INDUSTRY OUTLOOK

Regeneus focuses on early-stage product development, then partners. In addition to the AGC deal for Progenza in Japan, it has partnered with a global animal health company for CryoShot Canine. It will seek to identify wider applications of Progenza, beyond arthritis.

Y/E Jun	Revenue (A$m)	EBITDA (A$m)	PBT (A$m)	EPS (c)	P/E (x)	P/CF (x)
2017	10.0	4.9	3.3	1.57	7.0	6.4
2018	0.6	(4.8)	(5.2)	(2.48)	N/A	N/A
2019e	7.8	2.3	2.2	1.04	10.6	10.0
2020e	1.6	(4.0)	(4.2)	(2.00)	N/A	N/A

Sector: Pharma & healthcare

Price:	70.0p
Market cap:	£22m
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	35.9	29.6	(27.1)
Relative*	35.5	21.9	(27.5)

* % 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 has demonstrated positive response rates in key measures were sustained after extended follow-up. ReNeuron has started the placebo-controlled Phase IIb trial in chronic stroke disability with data expected in early 2020. ReNeuron also has the hRPC (human retinal progenitor cells) program for retinitis pigmentosa (currently in Phase I/II) and will also be starting a Phase IIa trial in cone-rod dystrophy. Interim data on the RP Phase I/II study was announced at the beginning of 2019 and early efficacy was striking. 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.

Y/E Mar	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2017	0.9	(19.8)	(18.2)	(0.49)	N/A	N/A
2018	0.9	(20.2)	(21.0)	(55.66)	N/A	N/A
2019e	0.0	(23.6)	(22.0)	(55.17)	N/A	N/A
2020e	0.0	(27.2)	(27.2)	(70.94)	N/A	N/A

Sector: Pharma & healthcare

Price:	€17.15
Market cap:	€962m
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	(5.2)	(2.0)	(2.6)
Relative*	(7.5)	(6.8)	1.0

* % Relative to local index

Analyst

Dr Susie Jana

ROVI Laboratorios Farmaceuticos (ROVI)

INVESTMENT SUMMARY

ROVI, a profitable, speciality healthcare company, 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 in 21 European countries (ahead of any competition). During 2018, ROVI commenced marketing in several European countries and has signed out-licensing agreements that cover 63 countries globally - key drivers for sales and operating growth in the medium term. R&D progress continues with its proprietary ISM technology, notably with Risperidone ISM or DORIA, a long-acting injectable for schizophrenia which has recently reported positive Top-line Phase III data.

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	42.9	37.3
2018	304.8	29.5	19.3	38.76	44.2	31.3
2019e	335.4	36.9	26.9	48.60	35.3	19.8
2020e	363.2	57.5	46.5	83.21	20.6	50.5

Sector: Pharma & healthcare

Price:	55.00PLN
Market cap:	PLN878m
Market	Warsaw Stock Exchange

Share price graph (PLN)

Company description

Selvita is an R&D and drug discovery services company. It operates two main business units: Innovations Platform (internal R&D pipeline) and Research Services (medicinal chemistry/biology, biochemistry).

Price performance

%	1m	3m	12m
Actual	(3.5)	5.8	(7.9)
Relative*	(3.8)	3.8	(8.8)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Selvita (SLV)

INVESTMENT SUMMARY

Selvita is an R&D and drug discovery services company. Total sales in Q318 were PLN 56.6m (an increase of 17% from Q318), with 85% of revenue coming from the services segment. In R&D, Selvita out-licensed its lead drug SEL24's to Menarini in March 2017 with a total potential value of the deal of €89.1m. SEL24 is a dual PIM/FLT3 inhibitor in Phase I/II for AML and the first such compound to progress to Phase I/II, to our knowledge. Second lead product is SEL120, a CDK8 inhibitor, partnered with the Leukemia & Lymphoma Society for AML and is undergoing IND-enabling studies. Multiple collaborations signed with partners such as Merck KGaA, H3 Biomedicine (Eisai) and JV (Nodthera) with Epidarex Capital validate Selvita's research capabilities. As of 30 September 2018, Selvita had PLN 104.7m in cash and other monetary assets.

INDUSTRY OUTLOOK

The profiles of SEL24 and SEL120 are potentially unique when 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)
2016	66.7	8.3	4.6	63.82	86.2	N/A
2017	105.9	18.5	10.2	50.76	108.4	73.9
2018e	104.7	(8.8)	5.9	11.61	473.7	N/A
2019e	119.9	(11.4)	(15.8)	(98.79)	N/A	N/A

Sector: Pharma & healthcare

Price:	66.5p
Market cap:	£77m
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	31.7	114.5	280.0
Relative*	31.2	101.8	278.0

* % 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 United Kingdom. Its primary focus is the commercialisation of Feraccru, approved by the EMA for the treatment of iron deficiency, with or without anaemia. Commercialisation of Feraccru in key markets (ex US) is in the hands of distribution partners Norgine, AOP Orphan and Ewopharma. Top-line data from a Phase IIIb marketing study (AEGIS-H2H) announced in March was positive and should drive clinical uptake and aid top-line growth. Shield retains the marketing rights to the US market and will seek a partner once a decision on regulatory approval is reached by the US FDA (PDUFA date of 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)
2016	0.3	(10.5)	(13.4)	(12.71)	N/A	N/A
2017	0.6	(18.5)	(18.4)	(15.15)	N/A	N/A
2018e	11.9	(3.6)	(5.9)	(3.62)	N/A	N/A
2019e	3.0	(7.0)	(9.3)	(6.69)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.92
Market cap:	US$62m
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	74.0	150.4	(74.2)
Relative*	71.2	130.7	(74.8)

* % 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 was 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 targeting patients that are in B-cell malignancies.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2016	2.5	(36.3)	(38.0)	(242.37)	N/A	N/A
2017	0.7	(34.4)	(35.5)	(144.63)	N/A	N/A
2018e	0.2	(27.5)	(28.3)	(79.53)	N/A	N/A
2019e	0.0	(30.4)	(31.1)	(48.97)	N/A	N/A

Sector: Pharma & healthcare

Price:	¥211.00
Market cap:	¥17386m
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	9.9	(1.4)	(7.9)
Relative*	8.2	(2.1)	0.2

* % Relative to local index

Analyst

Dr Dennis Hulme

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 i.v. was approved for r/r low grade NHL/MCL in 2010 and in 2016 received approvals in CLL and first-line low grade NHL/MCL; these new approvals saw in-market Treakisym sales increase by 12% in 2018, following 61% growth in 2017 (NHI price basis). SymBio has in-licensed liquid formulations for injection that will provide Treakisym with 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 minutes. A Phase III trial of Treakisym in r/r diffuse large B-cell lymphoma is underway. Rigosertib i.v. is in development for r/r higher-risk myelodysplastic syndromes (HR-MDS) and is in a pivotal Phase III global study in 360 patients; SymBio is enrolling patients in Japan and is aiming 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

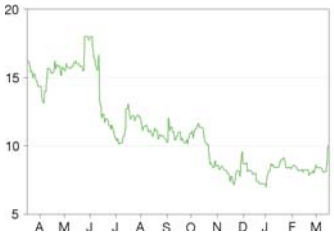
SymBio is focused on in-licensing niche opportunities in hard-to-treat indications often overlooked by big pharma. An in-house screening process to select additional pipeline candidates for development and commercialisation will be key to driving operating leverage.

Y/E Dec	Revenue (¥m)	EBITDA (¥m)	PBT (¥m)	EPS (fd) (¥)	P/E (x)	P/CF (x)
2017	3444.0	(3917.0)	(3977.0)	(79.84)	N/A	N/A
2018	3836.0	(2621.0)	(2749.0)	(41.38)	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:	NOK10.12
Market cap:	NOK532m
Market	Oslo

Share price graph (NOK)



Company description

Targovax is an immuno-oncology company headquartered in Oslo, Norway, with two technology platforms that are being developed in a number of oncological indications. ONCOS-102 is an oncolytic virus technology. TG is a therapeutic cancer vaccine platform comprising of peptides mimicking the most common RAS oncogenic mutations.

Price performance

%	1m	3m	12m
Actual	23.1	26.5	(38.2)
Relative*	21.6	20.0	(41.6)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Targovax (TRVX)

INVESTMENT SUMMARY

Targovax is an immuno-oncology (IO) company specialising in two distinct, but complementary immune activator approaches. ONCOS-102 is a genetically engineered adenovirus being tested in advanced melanoma, mesothelioma, peritoneal malignancies and prostate cancer. The next ONCOS-102 data is expected in H119 (Phase I melanoma), and H120 (Phase I/II mesothelioma). Targovax has also been developing two mutant RAS-specific neo-antigen vaccines from its TG platform. Phase 1b data on TG02 in colorectal cancer and new 3 year data on TG01 in pancreatic cancer are expected in H119. Targovax is exploring options for further development of TG01 including collaborations. In March 2019, Targovax partnered with Zelluna for the development of mutRAS TCR therapies worth NOK100m in milestones and annual fees.

INDUSTRY OUTLOOK

Checkpoint inhibitors (CPIs) gained popularity over the past several years, however, a large proportion of patients do not respond to CPIs. Both Targovax's platform technologies are designed to prime immune response to cancers, which offers synergies for use in combination with other immuno-oncology therapies.

Y/E Dec	Revenue (NOKm)	EBITDA (NOKm)	PBT (NOKm)	EPS (fd) (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)	(266.35)	N/A	N/A
2020e	0.0	(136.9)	(137.2)	(260.75)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.69
Market cap:	A$103m
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	(6.2)	21.2	42.7
Relative*	(7.9)	9.9	37.3

* % Relative to local index

Analyst

Dr Dennis Hulme

Telix Pharmaceuticals (TLX)

INVESTMENT SUMMARY

Telix has assembled a portfolio of molecularly targeted radiation therapeutic and imaging products for kidney, prostate and brain cancers. Each product has been validated by clinical studies or compassionate use, reducing development risk. It has acquired its JV partner ANMI in December, giving it full global rights to the illumet investigational prostate cancer imaging kit. It is already commercialising illumet in the US, including through Cardinal Health, and anticipates filing for US approval in 2019. It expects to fully enrol the ZIRCON confirmatory Phase III for kidney cancer imaging agent TLX250-CDx by end 2019. Preliminary data from the IPAX-1 Phase I/II study of TLX101 therapy in GBM (brain cancer) is expected in Q319. Telix plans to progress TLX591 therapy into Phase III in chemo-naive prostate cancer in H219/H120.

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)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	0.4	(6.4)	(6.4)	(4.98)	N/A	N/A
2018e	5.0	(13.0)	(12.7)	(6.21)	N/A	N/A
2019e	8.4	(17.8)	(17.7)	(8.33)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$4.55
Market cap:	US$5m
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	10.2	(1.5)	(18.5)
Relative*	8.3	(9.3)	(20.6)

* % 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 has also initiated a Phase IIa for obstructive sleep apnea (OSA) and is beginning a Phase IIa for low back pain.

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:	€2.88
Market cap:	€179m
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	4.0	(2.4)	(7.7)
Relative*	(0.8)	(12.0)	(8.8)

* % 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. Gross cash and short-term investments at 31st December were €16.9m. Transgene recently secured a €20m revolving credit facility with Natixis secured against its Tasly Biopharmaceuticals shares. We place our forecast under review.

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)	(52.0)	N/A	N/A
2018	42.9	9.1	(36.8)	12.9	22.3	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$2.90
Market cap:	US$110m
Market	NYSE MKT

Share price graph (US$)

Company description

VolitionRx is a Belgium-based diagnostics company focused on developing blood-based cancer diagnostics based on its proprietary Nu.Q™ technology. Its lead program is in colorectal cancer, which entered the European market in 2017.

Price performance

%	1m	3m	12m
Actual	0.7	38.1	23.9
Relative*	(1.0)	27.2	20.6

* % 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 cancer (CRC), a very large opportunity with around 225 million people eligible for screening (US/EU). VolitionRx will be participating in a 13,500 undiagnosed person trial in the US to gain FDA approval for front-line CRC screening. For Europe, the company plans to market a triage screening test followed by a front-line screening test. Volition recently announced positive data from a pancreatic cancer study with Nu.Q™. Volition's new partner Active Motif has started to sell Nu.Q™ assay research kits which Volition hope will help to validate the assays and explore new indications. As of end-Q418, Volition has $13.4m in cash, and post-period has benefited from the exercise of warrants totalling $6.7m.

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	(14.7)	(14.8)	(55.97)	N/A	N/A
2018	0.0	(17.9)	(18.0)	(57.37)	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:	SEK38.40
Market cap:	SEK319m
Market	NASDAQ OMX First North

Share price graph (SEK)

Company description

Xbrane Biopharma is a Swedish developer of biosimilar products. The lead product is Xlucane, a Lucentis biosimilar partnered with STADA and produced using an efficient manufacturing system. A triptorelin generic, Spherotide, is being sold in Iran.

Price performance

%	1m	3m	12m
Actual	(7.5)	(16.9)	(32.2)
Relative*	(8.8)	(23.9)	(34.0)

* % Relative to local index

Analyst

Dr John Savin

Xbrane Biopharma (XBRANE)

INVESTMENT SUMMARY

Xbrane now focuses on developing high-margin biosimilar products with Xlucane, its Lucentis biosimilar, as the lead product. After the July 2018 SEK78m upfront deal with STADA, Xbrane is starting the global XPLORE Phase III trial. The primary endpoint reports in mid-2020 and XPLORE completes in February 2021. Xbrane is raising SEK59.3m at SEK30 per share to help fund its 50% share of the XPLORE study. Xbrane sold SEK20m of Spherotide (a triptorelin generic) to Iran in 2018. A partner is needed to progress Spherotide development in Europe.

INDUSTRY OUTLOOK

Xlucane competitors include bioeq and Formycon with Phase III data and Samsung Bioepis with a Phase III reporting primary data soon. Roche has a bispecific antibody, faricimab, entering Phase III after a good Phase II performance with one injection every 16 weeks. It is also trialling new Lucentis delivery systems.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (fd) (öre)	P/E (x)	P/CF (x)
2017	20.8	(40.9)	(44.2)	(814.0)	N/A	N/A
2018	20.5	(7.5)	(12.6)	(204.0)	N/A	5.1
2019e	20.0	(140.5)	(146.9)	(1906.0)	N/A	N/A
2020e	20.0	(234.0)	(240.4)	(2896.0)	N/A	N/A

Company coverage

Company	Note	Date published
Acacia Pharma	Flash; Update	07/12/2018; 27/02/2019
Acarix	Update; Update	28/11/2018; 14/03/2019
Actinogen Medical	Initiation	18/03/2019
ADL Bionatur Solutions	Initiation	10/12/2018
AFT Pharmaceuticals	Update; Update	30/05/2018; 30/11/2018
ASIT biotech	Update; Flash	26/02/2019; 06/03/2019
Atossa Genetics	Update; Outlook	14/06/2018;07/12/2018
Auris Medical Holding	Update; Update	19/11/2018; 21/03/2019
Basilea Pharmaceutica	Update; Update	10/01/2019; 06/03/2019
BioPorto Diagnostics	Update; Update	09/10/2018; 27/02/2019
BONESUPPORT	Update; Update	16/11/2018; 20/03/2019
Brighter	Initiation; Update	25/09/2018; 05/03/2019
Cantargia	Update; Update	03/01/2019; 08/03/2019
Carmat	Update; Update	21/12/2017; 26/10/2018
CASI Pharmaceuticals	Initiation; Update	29/11/2018; 10/12/2018
Clal Biotechnology Industries	Update; Update	23/08/2018; 03/12/2018
Deinove	Update; Outlook	23/10/2017; 14/03/2019
Destiny Pharma	Flash; Update	25/01/2019; 25/02/2019
e-Therapeutics	Outlook; Update	12/12/2018; 05/03/2019
Elbit Medical Technologies	Update; Update	06/09/2018; 06/12/2018
Herantis Pharma	Initiation; Update	20/09/2018; 06/03/2019
Hutchison China Meditech	ADR Update; Update	20/08/2018; 18/09/2018
Immunicum	Update; Update	09/11/2018; 19/11/2018
Immunovia	Outlook; Update	22/03/2018; 06/09/2018
Immutep	Update; ADR Update	21/11/2018; 22/11/2018
InMed Pharmaceuticals	Update; Update	20/11/2018; 14/02/2019
International Stem Cell	Update; Update	20/08/2018; 04/12/2018
Kazia Therapeutics	ADR Update; ADR Update	19/09/2018; 29/10/2018
MagForce	Update; Update	07/11/2018; 21/11/2018
Medigene	Update; Update	19/11/2018; 04/01/2019
Mesoblast	Update; Update	07/06/2017; 07/11/2017
MGC Pharmaceuticals	Initiation; Update	22/10/2018; 01/03/2019
Mologen	Outlook; Update	21/09/2018; 04/01/2019
NetScientific	Update; Update	24/10/2018; 30/11/2018
NeuroVive Pharmaceutical	Outlook; Update	05/10/2018; 17/12/2018
Newron Pharmaceuticals	Update; Outlook	11/10/2018; 14/03/2019
Nuevolution	Update; Outlook	10/12/2018; 19/03/2019
Oncology Venture	Update; Update	21/12/2018; 13/02/2019
Onxeo	Update; Update	27/04/2018; 27/11/2018
Orexo	Update; Outlook	17/12/2018; 12/02/2019
Oryzon Genomics	Update; Update	09/11/2018; 27/02/2019
OSE Immunotherapeutics	Initiation	06/12/2018
Oxford BioMedica	Update; Update	08/06/2018; 09/11/2018
Pacific Edge	Update; Update	04/06/2018; 07/01/2019
Paion	Update; Update	13/08/2018; 12/11/2018
PDL BioPharma	Update; Update	16/08/2018; 13/11/2018

Photocure	Update; Update	16/08/2018; 22/11/2018
Pixium Vision	Flash; Update	11/01/2019; 19/02/2019
Quantum Genomics	Update; Update	09/10/2018; 13/11/2018
Regeneus	Outlook; Update	27/04/2018; 04/09/2018
ReNeuron Group	Flash; Update	24/01/2019; 22/02/2019
ROVI Laboratorios Farmaceuticos	Update; Flash	06/03/2019; 19/03/2019
Selvita	Update; Outlook	29/06/2018; 17/01/2019
Shield Therapeutics	Initiation; Update	19/02/2019; 04/03/2019
Sunesis Pharmaceuticals	Update; Update	10/12/2018; 07/02/2019
SymBio Pharmaceuticals	Update; ADR Update	07/12/2018; 12/12/2018
Targovax	Update; Update	21/11/2018; 12/03/2019
Telix Pharmaceuticals	Initiation; Update	20/08/2018; 31/10/2018
Therapix Biosciences	Update; Update	18/08/2017; 17/11/2017
Transgene	QuickView; Update	19/11/2018; 30/11/2018
VolitionRx	Update; Update	18/07/2018; 29/11/2018
Xbrane Biopharma	Outlook; Update	23/11/2018; 04/03/2019

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