EDISON

Edison Healthcare Insight

November 2018

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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 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 16 November 2018

Published 22 November 2018

Welcome to the November edition of the Edison Healthcare Insight. In this edition we have profiled 64 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 16 November

US$/£ exchange rate: 0.7772
€/£ exchange rate: 0.8801
C$/£ exchange rate: 0.5881
A$/£ exchange rate: 0.5652
NZ$/£ exchange rate: 0.5295
SEK/£ exchange rate: 0.0857
DKK/£ exchange rate: 0.1179
NOK/£ exchange rate: 0.0915
JPY/£ exchange rate: 0.0069
NIS/£ exchange rate: 0.2100
CHF/£ exchange rate: 0.7726

Sector: Pharma & healthcare

Price:	€3.12
Market cap:	€96m
Market	FRA

Share price graph (€)

Company description

4SC is a Munich-based cancer biopharmaceutical company. Resminostat (HDAC inhibitor) is the lead candidate for CTCL (pivotal study started in Q416). It has a second compound, domatinostat (formerly 4SC-202; Phase II). 4SC has several partners including Yakult Honsha for resminostat in Japan.

Price performance

%	1m	3m	12m
Actual	(2.6)	(22.2)	(36.7)
Relative*	1.1	(16.0)	(27.2)

* % Relative to local index

Analyst

Dr Jonas Peciulis

4SC (VSC)

INVESTMENT SUMMARY

4SC's two lead assets are Resminostat (a broad-spectrum HDAC inhibitor) and Domatinostat (4SC-202; HDAC Class I specific inhibitor). Resminostat is uniquely positioned as a maintenance therapy to make remissions more durable for patients with advanced CTCL, who have achieved remission with systemic therapy. Enrolment in the RESMAIN study is on track and recently reached 100 patients (4SC recruiting in Europe, Partner Yakult recruiting in Japan) and top-line data are expected in H120. Yakult has also initiated its own Phase II study for resminostat in biliary tract cancer in combination with S-1 chemotherapy. Domatinostat is being studied in Phase Ib/II SENSITIZE study in combination with pembrolizumab in melanoma, top-line data are expected by mid-2019. A second Phase II study EMERGE in GI cancer is expected to start in H218.

INDUSTRY OUTLOOK

Resminostat could become the first HDAC inhibitor to gain EU approval for CTCL (vs two HDACs approved in the US), but more importantly the maintenance treatment indication would be unique, potentially offering a competitive edge in Europe, the US and Japan.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	2.1	(10.9)	(10.9)	(54.17)	N/A	N/A
2017	4.2	(9.8)	(10.0)	(40.58)	N/A	N/A
2018e	4.7	(17.5)	(17.6)	(57.39)	N/A	N/A
2019e	3.1	(19.1)	(19.2)	(62.58)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.15
Market cap:	€115m
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	(19.8)	(30.6)	N/A
Relative*	(19.0)	(25.8)	N/A

* % Relative to local index

Analyst

Dr Susie Jana

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 quickly resubmitted to the FDA following receipt of a CRL (in October) relating to deficiencies at the contract manufacturer. We still anticipate US launch of BARHEMSYS in Q219 for PONV 'rescue treatment' and expect broadening of use for PONV prophylaxis in subsequent years. As of 30 September, Acacia had net cash of £27.1m.

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)
2016	0.0	(14.4)	(16.3)	(5.06)	N/A	N/A
2017	0.0	(3.0)	(6.5)	(2.32)	N/A	N/A
2018e	0.0	(16.7)	(18.4)	(0.33)	N/A	N/A
2019e	2.6	(42.7)	(45.1)	(0.81)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK7.40
Market cap: SEK170m
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 the patients to be ruled out from further, expensive testing. Private sales in Germany have started. Full EU sales may start in late 2019. US sales might start from 2022.

Price performance

%	1m	3m	12m
Actual	0.0	23.8	(48.1)
Relative*	3.6	32.9	(45.3)

* % Relative to local index

Analyst

Dr John Savin

Acarix (ACARIX)

INVESTMENT SUMMARY

Acarix's Q3 results showed rising sales with seven systems and 680 disposable patches. This is a marked sales upturn over the quiet summer period. In the year to date 15 systems and 1,480 patches have been sold giving revenues of SEK815k and gross profit of SEK575k. German reimbursement is anticipated in 2019. Per Persson, formerly commercial officer, has moved to become CEO. Cash was SEK73.9m.

INDUSTRY OUTLOOK

CADScor helps doctors to identify cardiac patients who probably require no further risky invasive clinical testing. Acarix has positive feedback from private German users of its system. A strategic alliance with MED to help sales in Germany was announced in October. The Dan-NICAD II study is evaluating the test in patients aged 30–39 with suspected stable coronary artery disease to aid key opinion leader acceptance of CADScor. The 'Seismo' study is exploring the use of CADScor for the early diagnosis of heart failure. We assume a US trial starts in 2019 with a 2022 launch.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2016	N/A	(26.8)	(26.8)	(183.01)	N/A	N/A
2017	0.6	(29.2)	(30.7)	(129.31)	N/A	N/A
2018e	1.1	(31.4)	(33.7)	(146.26)	N/A	N/A
2019e	3.8	(57.3)	(59.8)	(259.68)	N/A	N/A

Sector: Pharma & healthcare

Price: NZ$2.25
Market cap: NZ$219m
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	2.3	(2.2)	(2.2)
Relative*	2.3	1.3	(7.6)

* % Relative to local index

Analyst

Maxim Jacobs

AFT Pharmaceuticals (AFT)

INVESTMENT SUMMARY

AFT Pharmaceuticals is a New Zealand-based speciality pharmaceutical company that currently sells 130 prescription speciality 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 that is addressing a $10.4b market, is currently sold and launched in 10 countries and distribution agreements are in place in a total of 125. Additionally, AFT recently reported positive results from a pivotal trial for Maxigesic IV. 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	99.6	1.9	0.0	4.56	49.3	N/A
2020e	120.7	11.7	9.9	10.13	22.2	23.7

Sector: Pharma & healthcare

Price:	€1.83
Market cap:	€33m
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)	(50.8)	(54.8)
Relative*	(29.7)	(47.4)	(48.9)

* % 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+ starts recruiting at the end of Q418 and results are expected after the pollen season of 2019. We expect ASIT Biotech to self-market its products in Europe and outlicense rights in ex-Europe. ASIT recently raised money to fully-fund its clinical programs.

INDUSTRY OUTLOOK

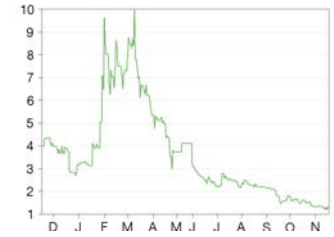
Although grass pollen and house dust mite allergies are not life-threatening in most cases, they result in a significant symptom burden for affected patients. With a safe and effective four-dose regimen, ASIT could expect some usage in the less-severe segment where currently a regimen of many doses does not balance the risk-benefit.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.0	(12.3)	(12.3)	(110.00)	N/A	N/A
2017	0.0	(12.0)	(12.0)	(93.60)	N/A	N/A
2018e	0.0	(13.3)	(13.3)	(84.74)	N/A	N/A
2019e	0.0	(16.2)	(16.1)	(91.72)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.22
Market cap:	US$7m
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	(24.2)	(47.2)	(69.9)
Relative*	(22.2)	(45.2)	(71.5)

* % 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 raised $13.4m gross ($12.1m net) through a Q218 rights offering. It 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	(11.4)	(11.4)	(429.43)	N/A	N/A
2019e	0.0	(7.0)	(7.0)	(257.02)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$0.54
Market cap:	US$17m
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	(63.3)	126.3	(93.2)
Relative*	(62.3)	134.9	(93.6)

* % 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)
2016	0.0	(30.3)	(31.0)	(89.87)	N/A	N/A
2017	0.0	(24.5)	(25.9)	(53.60)	N/A	N/A
2018e	0.0	(11.7)	(12.7)	(41.58)	N/A	N/A
2019e	0.0	(11.4)	(11.8)	(30.78)	N/A	N/A

Sector: Pharma & healthcare

Price:	CHF45.92
Market cap:	CHF545m
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	(6.3)	(24.3)	(39.6)
Relative*	(7.5)	(23.6)	(38.0)

* % 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). During H118 Zevtera initiated the US Phase III registration trials in ABSSSI and SAB. Multiple licensing/distribution agreements announced in 2017 for marketed assets Cresemba and Zevtera should drive top-line growth faster than we had expected. Major deals with Pfizer include Cresemba in Europe (ex Nordics), Russia, Turkey, Israel, China and Asia-Pacific. Basilea's oncology pipeline focuses on drugs that target resistance to current cancer therapies. BAL101553 (Phase IIA in glioblastoma and ovarian cancer) and BAL3833 (phase I in solid tumours). Basilea has in-licensed ARQ 087 (derazantinib) from ArQule, a pan FGFR tyrosine kinase inhibitor in Phase II registration study for intrahepatic cholangiocarinoma and Phase I/II development for solid tumours.

INDUSTRY OUTLOOK

There is an increasing need for novel antimicrobial agents with efficacy against resistant strains of bacteria (eg MRSA) and/or improved side effect profiles. Hence the opportunities for Zevtera and Cresemba could be significant.

Y/E Dec	Revenue (CHFm)	EBITDA (CHFm)	PBT (CHFm)	EPS (fd) (CHFc)	P/E (x)	P/CF (x)
2016	66.0	(41.6)	(50.9)	(505.74)	N/A	N/A
2017	101.5	(12.2)	(18.9)	(178.36)	N/A	26.1
2018e	124.0	(21.9)	(29.6)	(274.34)	N/A	N/A
2019e	137.3	(18.8)	(26.7)	(247.83)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS14.67
Market cap:	NIS67m
Market	TASE

Share price graph (NIS)

Company description

Based in Israel, BioLight is an emerging ophthalmic company focused on the development and commercialisation of products and product candidates that address ocular conditions. Lead products IOPtiMate and VS-101 are directed towards the treatment of glaucoma.

Price performance

%	1m	3m	12m
Actual	(3.0)	20.4	15.8
Relative*	(4.4)	15.7	1.1

* % Relative to local index

Analyst

Pooya Hemami

Bio-Light Life Sciences (BOLT)

INVESTMENT SUMMARY

BioLight Life Sciences is developing Eye-D VS-101, an extended-dose latanoprost drug implant designed to treat glaucoma (and had positive data in a Phase I/IIa trial) and TeaRx, a dry-eye syndrome diagnostic test. VS-101 can be helpful for the 20-60% of glaucoma patients who do not comply with daily eye-drop therapy.

INDUSTRY OUTLOOK

BioLight's IOPtima subsidiary signed an agreement in Q417 to be acquired by Chengdu Kanghong Pharma in a four-stage transaction. The gross proceeds to BioLight for its stake should range between $23m and $27m (by mid-2021). BioLight reported in September 2018 that it received c $12m for the sale of roughly half of its IOPtima stake to Chengdu. Chengdu now holds 60% of IOPtima and BioLight now holds 26%. BioLight raised NIS11.4m in May 2018 through the issuance of 908,540 shares.

Y/E Dec	Revenue (NISm)	EBITDA (NISm)	PBT (NISm)	EPS (NIS)	P/E (x)	P/CF (x)
2016	2.1	(20.2)	(26.3)	(5.37)	N/A	N/A
2017	1.2	(26.8)	(26.6)	(5.29)	N/A	N/A
2018e	0.9	(24.0)	(26.3)	(5.21)	N/A	N/A
2019e	0.9	(24.4)	(26.3)	(5.56)	N/A	N/A

Sector: Pharma & healthcare

Price:	DKK3.83
Market cap:	DKK596m
Market	NASDAQ OMX First North

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 a portfolio of products marketed for research use and The NGAL Test, which the company has submitted to the FDA for the prediction of acute kidney injury.

Price performance

%	1m	3m	12m
Actual	(2.1)	12.5	7.3
Relative*	(1.4)	24.2	17.0

* % 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 has completed initial clinical trials and has been submitted for 510(k) approval with the FDA. 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)
2016	20.7	(22.6)	(22.4)	(157.0)	N/A	N/A
2017	25.2	(33.1)	(33.7)	(203.0)	N/A	N/A
2018e	29.6	(37.6)	(37.2)	(209.0)	N/A	N/A
2019e	34.7	(17.7)	(17.0)	(91.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK19.80
Market cap:	SEK1006m
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	0.3	39.4	(10.4)
Relative*	4.0	49.8	(5.6)

* % 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 25 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. After a successful IPO in June 2017 raising SEK520m, the company is well funded.

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)
2016	104.6	(87.4)	(108.4)	(422.06)	N/A	N/A
2017	129.3	(97.9)	(126.7)	(320.78)	N/A	N/A
2018e	103.8	(174.4)	(174.3)	(344.22)	N/A	N/A
2019e	213.8	(140.9)	(141.0)	(272.11)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK10.70
Market cap:	SEK791m
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	(23.5)	19.8	(2.0)
Relative*	(20.7)	28.7	3.2

* % 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 launch of Actiste, a mobile-connected glucose meter and insulin injection device for diabetes. Brighter's Actiste integrates three essential steps for daily diabetes management into one device: a blood glucose meter, a lancer and insulin injection apparatus. By reducing the number of treatment steps to nine from 28 in comparison to traditional self-blood glucose (SMBG) meters, Brighter's goal is to promote patient adherence and concordance to daily insulin-dependent diabetes management in an effort to reduce complications associated with poor self-care.

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)
2016	3.3	(17.3)	(18.7)	(23.53)	N/A	N/A
2017	1.4	(19.7)	(22.8)	(42.01)	N/A	N/A
2018e	2.1	(30.0)	(33.8)	(51.32)	N/A	N/A
2019e	9.2	(49.4)	(53.5)	(75.49)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK15.70
Market cap: SEK1039m
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	(21.9)	(9.5)	118.2
Relative*	(19.0)	(2.8)	129.8

* % 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 is focusing on several solid tumours, and the Phase II part will focus on NSCLC and pancreatic cancer. Nidanilimab was well tolerated in the first 16 patients, and final safety data are expected in Q418. Nidanilimab has a dual mechanism of action: inhibition of IL-1 signaling and antibody-dependent cellular cytotoxicity (ADCC). Novartis is starting 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)
2016	0.0	(47.6)	(47.5)	(271.96)	N/A	N/A
2017	0.0	(60.0)	(60.3)	(186.00)	N/A	N/A
2018e	0.0	(85.8)	(83.3)	(147.34)	N/A	N/A
2019e	0.0	(93.8)	(93.5)	(141.19)	N/A	N/A

Sector: Pharma & healthcare

Price: €21.00
Market cap: €189m
Market Euronext Growth

Share price graph (€)

Company description

Carmat is developing a biocompatible, artificial heart to satisfy the lack of donor hearts available for terminal heart failure patients. The development process combines the expertise of a wide range of technical and medical experts.

Price performance

%	1m	3m	12m
Actual	(9.1)	(19.2)	(12.5)
Relative*	(6.2)	(13.7)	(7.3)

* % Relative to local index

Analyst

Maxim Jacobs

Carmat (ALCAR)

INVESTMENT SUMMARY

Carmat is currently enrolling its 20-patient study for its artificial heart in France, Kazakhstan, the Czech Republic and Denmark. To date, ten patients have been implanted, with a 100% survival rate at one-month. Most notably, Carmat announced the first successful donor heart transplant of a TAH patient who was initially too sick to receive a donor heart. It also announced the certification of its new and more automated production facility, in Bois-d'Arcy, which will enable the production of up to 800 Carmat TAH units per year at full capacity.

INDUSTRY OUTLOOK

The Carmat artificial heart is being developed as a permanent replacement or destination therapy (DT) 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$17.33
Market cap:	US$319m
Market	NASDAQ

Share price graph (US$)

Company description

Cellular Biomedicine Group is a biotechnology company developing cell-based therapeutics with operations primarily in China.

Price performance

%	1m	3m	12m
Actual	4.6	(9.7)	69.1
Relative*	7.5	(6.3)	59.8

* % Relative to local index

Analyst

Dr Nathaniel Calloway

Cellular Biomedicine Group (CBMG)

INVESTMENT SUMMARY

Cellular Biomedicine Group (CBMG) is a trans-Pacific cell therapy company developing products in China and the US. It has signed an agreement with Novartis to manufacture the CAR-T therapy Kymriah for the Chinese market. It also has a series of internal CAR-T programs, which will be entering the clinic in late 2018 and 2019. Additionally, it is adapting its knee osteoarthritis (KOA) treatment ReJoin as an allogeneic product, AlloJoin, which recently completed Phase I testing.

INDUSTRY OUTLOOK

The company is focusing on advancing its CAR-T pipeline. The first CAR-T therapies were just recently approved in 2017 for the treatment of ALL and DLBCL, with developing ongoing in other hematologic malignancies such as multiple myeloma. Progress in the space has triggered significant M&A interest: Gilead bought Kite Pharma for $12bn in August 2017, and Celgene has an outstanding tender offer for Juno Therapeutics at $9bn.

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2016	0.6	(15.7)	(18.1)	(134.30)	N/A	N/A
2017	0.3	(19.2)	(20.1)	(140.41)	N/A	N/A
2018e	0.1	(22.7)	(27.1)	(143.01)	N/A	N/A
2019e	5.3	(17.5)	(21.6)	(108.59)	N/A	N/A

Sector: Pharma & healthcare

Price:	€23.20
Market cap:	€277m
Market	Euronext Brussels

Share price graph (€)

Company description

Celyad is developing an innovative Natural Killer Receptor CAR T-cell therapy (CYAD-01). This focuses on AML and metastatic colorectal cancer. A comprehensive set of clinical studies is underway and allogeneic therapy trials should start in 2019.

Price performance

%	1m	3m	12m
Actual	(1.3)	(8.2)	(43.0)
Relative*	(0.3)	(1.8)	(35.6)

* % Relative to local index

Analyst

Dr John Savin

Celyad (CYAD)

INVESTMENT SUMMARY

The current NRK autologous CAR T-cell therapy colorectal SHRINK trial reported interesting data at SITC in November, showing responses in combination with FOLFOX and good cell expansion after lympho-depletion. Celyad's trial design for its allogeneic (CYAD-101) is an important milestone, is FDA agreed and should start in Q119. This gives Celyad the lead in a mass-market solid cancer, where allogeneic therapy is likely to be essential. In AML, three responses out of seven patients (at various doses) were reported in an ASH abstract; an updated presentation will be given in early December. Celyad had €62.4m cash on 30 June. The H118 operational cash outflow was €13.9m.

INDUSTRY OUTLOOK

CAR T-cell therapeutics remain a hot area for investment with increasing interest in the next stage of allogeneic products, where Celyad holds a key patent. Celyad remains in a key position in both AML and mCRC with a strong programme in solid tumours.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	8.5	(21.2)	(20.0)	(209.0)	N/A	N/A
2017	3.5	(22.3)	(26.8)	(279.0)	N/A	N/A
2018e	0.0	(26.5)	(27.3)	(243.0)	N/A	N/A
2019e	0.0	(27.8)	(28.5)	(238.0)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS3.15
Market cap:	NIS508m
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	(8.4)	(0.8)	(0.8)
Relative*	(9.6)	(4.7)	(13.4)

* % 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 programs in Phase III or Phase III ready. 2018 and 2019 are expected to be very eventful years for CBI, with key data expected from several portfolio companies, including MediWound. Also, so far two portfolio companies have had NASDAQ listings this year (Neon and Gamida Cell) with Anchiano targeting a NASDAQ offering in the coming months.

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:	€2.08
Market cap:	€32m
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	(10.3)	(15.6)	17.5
Relative*	(7.5)	(9.8)	24.5

* % Relative to local index

Analyst

Dr Jonas Peciulis

Deinove (ALDEI)

INVESTMENT SUMMARY

FY18 is shaping up to be a pivotal year for Deinove with the launch of two products in its cosmetic division, and a number of antibiotics deals. These deals include the acquisition of Morphochem's clinical-stage antibiotic compound MCB3837, as well as a clinical-stage compound (DNV3837) and a license option on a preclinical anti-gram-negative program (NBTI). Deinove also has signed partnership agreements with Redx Pharma, Naicons and bioMérieux. Deinove recently raised €8.5m (via the issue of 3.15m shares at a price of €2.7 per share, resulting in dilution of 20.2%) to enable it to launch a Phase II clinical trial for the Morphochem compound (late 2018) and finance its other activities. As a result of contributing €2m to the capital increase, TVM Capital now holds 7.4% of Deinove. Our forecasts are under review.

INDUSTRY OUTLOOK

Environmentalism will underpin growth in green chemistry and the 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)	(72.6)	N/A	N/A
2017	0.2	(8.5)	(9.7)	(67.7)	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:	72.5p
Market cap:	£32m
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	(9.9)	(26.3)	(43.6)
Relative*	(9.0)	(20.4)	(40.5)

* % 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. 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	0.0	(1.3)	(1.5)	(3.94)	N/A	N/A
2017	0.0	(2.5)	(3.2)	(8.45)	N/A	N/A
2018e	0.0	(6.8)	(7.4)	(14.28)	N/A	N/A
2019e	0.5	(8.3)	(8.3)	(15.29)	N/A	N/A

Sector: Pharma & healthcare

Price:	7.2p
Market cap:	£19m
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	(3.3)	(12.1)	(22.7)
Relative*	(2.3)	(5.0)	(18.4)

* % Relative to local index

Analyst

Andy Smith

e-Therapeutics (ETX)

INVESTMENT SUMMARY

e-Therapeutics (ETX) offers investors an 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 (NCEs) in immunoncology that are the subject of business development efforts and are on the cusp of commercial validation. The priority for the company is securing partnership deals to provide external validation and ETX 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 like 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 mechanistic modelling of disease.

Y/E Jan	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2017	0.0	(14.2)	(14.1)	(4.1)	N/A	N/A
2018	0.0	(6.7)	(6.7)	(2.0)	N/A	N/A
2019e	0.0	(5.0)	(5.1)	(1.4)	N/A	N/A
2020e	0.0	(4.0)	(4.0)	(1.1)	N/A	N/A

Sector: Pharma & healthcare

Price:	NIS1.14
Market cap:	NIS265m
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	14.9	12.1	13.4
Relative*	13.3	7.6	(1.0)

* % Relative to local index

Analyst

Maxim Jacobs

Elbit Medical Technologies (EMTC)

INVESTMENT SUMMARY

Elbit Medical Technologies is an Israel-based healthcare investment company. The company holds a ~22% (~18.5% fully diluted) stake in InSightec, a commercial-stage medical device company. InSightec's ExAblate uses MRI and high-intensity focused ultrasound to perform precise and incisionless thermal tissue ablation. ExAblate has achieved FDA and CE approval for three distinct indications, with revenues of $32.1m for FY17. The company is also invested in Gamida Cell (~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 $50m.

INDUSTRY OUTLOOK

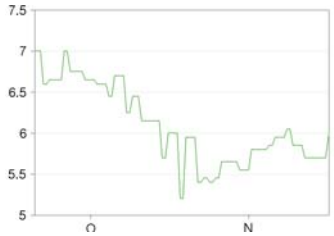
Elbit Medical Technologies is invested in the healthcare sector through its holdings in two companies that are developing medical device and therapeutic technologies.

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:	€6.00
Market cap:	€30m
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	0.0	(13.7)	0.2
Relative*	3.2	(7.8)	2.6

* % 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)
2016	0.0	N/A	(4.4)	(107.5)	N/A	N/A
2017	0.0	N/A	(0.1)	(3.2)	N/A	N/A
2018e	0.0	N/A	(3.2)	(64.5)	N/A	N/A
2019e	0.0	N/A	(3.4)	(68.2)	N/A	N/A

Sector: Pharma & healthcare

Price:	4515.0p
Market cap:	£3008m
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	2.6	(1.0)	(12.5)
Relative*	3.7	7.0	(7.7)

* % Relative to local index

Analyst

Dr Susie Jana

Hutchison China MediTech (HCM)

INVESTMENT SUMMARY

HCM has built a substantial pipeline of potential first-in-class or best-in-class tyrosine kinase inhibitor (TKI) drugs, some of which are in development with strategic partners. Lead TKI asset, fruquintinib has received China registration approval from the National Medicinal Products Administration of China (NMPA) for the treatment of CRC (3L). The molecular epidemiology study data on savolitinib in PRCC could support a US NDA submission. The recent expansion of its US and international operations (US office in New Jersey and the appointment of US CMO and head of international operations) will enable HCM to execute its international R&D and commercialisation strategies for its wholly owned late-stage oncology assets. As of 30 June, HCM had net cash of $295.8m. Following the failure to reach the primary endpoint in the Phase III FALUCA trial, our valuation 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	301.5	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:	SEK8.55
Market cap:	SEK436m
Market	OMX

Share price graph (SEK)

Company description

Immunicum is a clinical-stage immunoncology company based in Gothenburg, 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	(5.0)	12.7	11.8
Relative*	(1.5)	21.0	17.8

* % Relative to local index

Analyst

Andy Smith

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. Two studies are expected to report 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 are also expected in H219. Immunicum announced 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)
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	0.0	(80.6)	(80.3)	(309.0)	N/A	N/A
2018e	0.0	(95.8)	(95.9)	(193.9)	N/A	N/A
2019e	0.0	(266.8)	(266.8)	(289.2)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK148.40
Market cap: SEK2570m
Market NASDAQ OMX First North

Share price graph (SEK)

Company description

Immunovia is a Swedish company, specialised in diagnostics for oncology and autoimmune diseases. Its main product is IMMray PanCan-d, an antibody microarray based on its proprietary IMMray platform. A prospective trial in high-risk patients will start in Q416. The company expects to generate initial out-of-pocket sales in 2018.

Price performance

%	1m	3m	12m
Actual	(9.6)	(39.4)	48.8
Relative*	(6.3)	(34.9)	56.7

* % Relative to local index

Analyst

Dr John Savin

Immunovia (IMMUNOV)

INVESTMENT SUMMARY

Immunovia is developing IMMray PanCan-d, a blood-based test for the early detection of pancreatic cancer. Immunovia is running the PANFAM-1 prospective trial in high-risk patients and expects to generate initial self-pay sales in late 2019. A retrospective study is also being run to compare diabetes patients who developed pancreatic cancer with those who did not. Immunovia is also conducting the PANDIA-1 study in patients >50 years old with new onset diabetes. Additionally, IMMray has potential in immune diseases and lung cancer. A trial in CCP negative rheumatoid arthritis showed a major breakthrough with an accuracy higher than 90%. Cash at end-September 2018 was SEK415.6m.

INDUSTRY OUTLOOK

Immunovia is targeting a potential market of over SEK41bn. Immunovia has now made a strategic decision to focus on RA in immune diseases. The company's goal is to reach SEK 250-300 million in turnover in 2022 from self pay and a turnover of SEK 800-1,000 million in 2024 after reimbursement.

Y/E Dec	Revenue (SEKm)	EBITDA (SEKm)	PBT (SEKm)	EPS (öre)	P/E (x)	P/CF (x)
2016	24.5	(14.4)	(14.7)	(98.0)	N/A	N/A
2017	24.2	(44.3)	(45.2)	(267.0)	N/A	N/A
2018e	29.9	(72.5)	(74.2)	(400.0)	N/A	N/A
2019e	22.6	(85.8)	(88.8)	(456.0)	N/A	N/A

Sector: Pharma & healthcare

Price: A$0.04
Market cap: A$120m
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)	14.7	62.5
Relative*	(11.0)	26.3	68.1

* % 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 (155 of 226 patients recruited in randomised Phase IIb, initial PFS data expected H219) and in melanoma in combination with Keytruda (33% response rate in three dose-finding cohorts, 61% response rate from start of Keytruda monotherapy screening). 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 this year. Immutep will collaborate with Merck & Co (MSD) in a study of efti plus Keytruda in lung and head and neck cancers in Q418. A trial of efti plus Bavencio in advanced solid tumours in collaboration with Merck KGaA/Pfizer is also planned.

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$0.55
Market cap:	C$94m
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	(27.6)	(20.3)	(15.4)
Relative*	(25.6)	(14.7)	(11.0)

* % 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 and/or an IND for INM-750 in H219.

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	(7.6)	(7.5)	(4.20)	N/A	N/A
2020e	0.0	(11.6)	(11.5)	(6.19)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.62
Market cap:	US$11m
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	5.9	6.6	(0.5)
Relative*	8.7	10.6	(5.9)

* % 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 103.1% in Q218 to $2.7m.

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 (fd) (c)	P/E (x)	P/CF (x)
2016	7.2	(4.5)	(4.9)	(33.82)	N/A	N/A
2017	7.5	(4.6)	(4.9)	(145.96)	N/A	N/A
2018e	11.2	(3.2)	(3.9)	(61.12)	N/A	N/A
2019e	12.2	(6.7)	(8.2)	(122.34)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.38
Market cap:	A$23m
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) and a discovery-stage anti-tropomyosins program. GDC-0084 was inlicensed from Genentech, and Kazia is seeking other in-licence opportunities.

Price performance

%	1m	3m	12m
Actual	(11.6)	(20.0)	0.0
Relative*	(9.3)	(11.9)	3.4

* % 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 March; an initial Phase IIa dose-optimisation study will precede a randomised Phase IIb trial in 228 first-line glioblastoma patients (final data due 2021). 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. Kazia is collaborating with Noxopharm to support the development of NOX66.

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:	€5.98
Market cap:	€158m
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	(3.5)	8.5	(21.3)
Relative*	0.2	17.1	(9.5)

* % Relative to local index

Analyst

Dr Susie Jana

MagForce (MF6)

INVESTMENT SUMMARY

MagForce is moving forward with 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 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 Poland is expected by year end, 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 August 2018 MagForce USA capital increase ($9m gross) will finance the trial to completion, with commercial treatments potentially starting in Q419 (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:	€9.59
Market cap:	€235m
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	(14.0)	(28.5)	(12.5)
Relative*	(10.7)	(22.9)	0.7

* % 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. Medigene has announced an exclusive licence agreement with Leiden University to develop TCRs against HA-1 antigen. Its partnership with bluebird bio to utilise its TCR technology platform was recently expanded (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 30th September cash was €76.3m.

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)
2016	9.7	(12.4)	(13.4)	(66.20)	N/A	N/A
2017	11.4	(12.1)	(12.4)	(60.42)	N/A	N/A
2018e	10.4	(18.2)	(17.8)	(76.38)	N/A	N/A
2019e	11.0	(18.0)	(17.2)	(70.41)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$1.38
Market cap:	A$686m
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	(32.0)	(14.0)	12.2
Relative*	(30.2)	(5.3)	16.1

* % Relative to local index

Analyst

Maxim Jacobs

Mesoblast (MSB)

INVESTMENT SUMMARY

The potentially pivotal 55 paediatric patient acute graft vs host disease (GvHD) study met its primary endpoint, with a 69% overall response rate vs 45% for historical controls (p=0.0003). Survival at day 180 was 69% compared to historical rates of 10–30% in Grade C/D disease patients. Based on these results, the company is working towards a pre-BLA meeting in the next few months. Importantly, the Phase IIb data in 159 end-stage CHF patients with an LVAD was presented at a late-breaking session at the American Heart Association (AHA). While the trial missed the primary endpoint, the company highlighted there was a significant reduction in major GI bleeding events (p=0.02), which based on prior feedback from the FDA is a clinically meaningful outcome.

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$50m
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	(48.1)	(28.1)	(44.6)
Relative*	(46.7)	(20.8)	(42.7)

* % 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. 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. It has received Therapeutic Goods Administration (TGA) authorisation for CannEpil to be prescribed as an Investigational Medicinal Product in Australia. MGC has signed a definitive agreement for the sale of its MGC Derma cannabis-based cosmetics business to Cannaglobal for up to C$15m (A$16m).

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 consequently 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)	(0.45)	N/A	N/A
2020e	8.9	(6.4)	(6.6)	(0.50)	N/A	N/A

Sector: Pharma & healthcare

Price:	€3.05
Market cap:	€28m
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	3.0	(46.7)	(76.2)
Relative*	7.0	(42.4)	(72.6)

* % 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 (mCRC) maintenance will read out in H219. In October, Mologen received termination declarations from the principle creditor for its 2016/2024 and 2017/2025 bonds, an agreement with the principle bond holder has now been reached that should avert immediate payment of both bonds (totalling €6.6m). Mologen recently terminated the negotiations with Oncologie for global assignment of lefitolimod, we place our valuation under review.

INDUSTRY OUTLOOK

Results for IMPALA are expected in 2018/19. Final overall survival (OS) data from IMPACT (Phase II in mCRC) and IMPULSE may offer fresh financing/partnering opportunities for lefitolimod before then.

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	6.0	(10.6)	(11.1)	(0.98)	N/A	N/A
2019e	7.0	(9.3)	(9.7)	(0.86)	N/A	N/A

Sector: Pcare & household prd

Price:	26.5p
Market cap:	£21m
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	(0.8)	(25.6)	(57.9)
Relative*	0.3	(19.6)	(55.6)

* % 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). The aim is to bring these to commercialisation over the next two years, with the ultimate goal of an exit, realising value for investors. Importantly, Glycotest announced that Fosun Pharma, a c. HK$70bn Chinese pharmaceutical company, 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.

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	0.4	(11.3)	(11.1)	(8.5)	N/A	N/A
2019e	2.3	(12.0)	(13.4)	(12.3)	N/A	N/A

Sector: Pharma & healthcare

Price:	SEK3.20
Market cap:	SEK293m
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	(15.1)	(36.8)	(11.0)
Relative*	(12.0)	(32.1)	(6.3)

* % 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 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 H218/H119. 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 is planning to start a Phase Ib study in H218. A recent highlight is the out-licensing of a subset of compounds from NVP015 program for localized treatment of LHON to BridgeBio Pharma for a deal value of around $60m. Other products for out-licensing include NV556 and NVP022 for NASH and NVP024 for hepatocellular carcinoma.

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)
2016	0.0	(69.9)	(70.7)	(172.27)	N/A	N/A
2017	0.6	(67.9)	(70.1)	(149.31)	N/A	N/A
2018e	1.5	(82.6)	(83.0)	(120.86)	N/A	N/A
2019e	1.5	(130.0)	(130.1)	(146.48)	N/A	N/A

Sector: Pharma & healthcare

Price: CHF7.59
Market cap: CHF135m
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	(14.3)	(28.8)	(39.3)
Relative*	(15.4)	(28.1)	(37.6)

* % 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 54% (to €2m) y-o-y in H118 and in October partner Meiji submitted a MAA in Japan for salfinamide. The pivotal trial STARS (placebo-controlled Phase II/III trial) to investigate Sarizotan for breathing disorders associated with Rett syndrome has initiated and enrollment is expected to complete in H119. Following positive data from a Phase II study of evenamide, two Phase II/III studies are expected to initiate in 2019, to investigate evenamide for schizophrenia (as an add-on to atypical antipsychotics). As of 30 June 2018, Newron had net cash and short-term investments of €50.6m.

INDUSTRY OUTLOOK

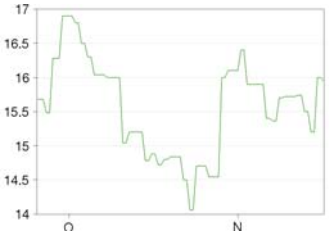
Parkinson's disease is a growing market. Xadago could have a unique position, with once-a-day dosing and a clean safety profile.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	6.7	(15.3)	(15.2)	(103.69)	N/A	N/A
2017	13.4	(4.3)	(5.3)	(32.32)	N/A	N/A
2018e	5.6	(24.7)	(24.5)	(137.90)	N/A	N/A
2019e	10.7	(28.3)	(28.2)	(158.27)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK15.94
Market cap: SEK789m
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	7.1	3.9	(13.4)
Relative*	11.0	11.6	(8.7)

* % 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. The technology has received powerful external validation, including three collaborations (Amgen, Almirall and Janssen) that could generate significant value in the coming years. In addition, we expect Nuevolution to progress at least one internally generated asset into clinical development in the near future. With the completion of the up-listing to the Nasdaq Stockholm main market and the successful gross SEK110m capital raise, Nuevolution continues to strengthen both its investor base and financial position. As of 30 June, Nuevolution had net cash of SEK158.0m.

INDUSTRY OUTLOOK

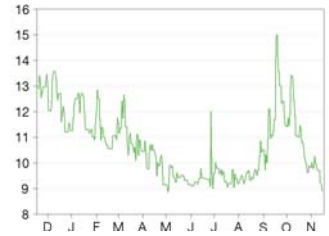
Significant promise is seen in DNA-encoded libraries due to the potential to rapidly develop small molecule drugs to ‘tough-to-drug’ targets. We continue to see major investment in the space from an array of companies, notably GSK, Roche and Novartis.

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	112.6	N/A	(20.9)	(0.3)	N/A	N/A
2019e	286.8	N/A	150.0	2.0	797.0	6.8

Sector: Pharma & healthcare

Price: SEK8.90
Market cap: SEK447m
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	(19.1)	(5.7)	(29.4)
Relative*	(16.1)	1.3	(25.6)

* % 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

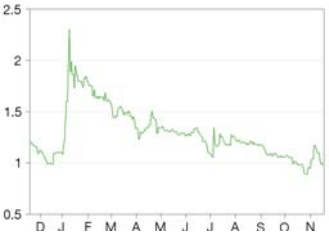
Oncology Venture and the DRP system have the potential to identify the value in drug assets that have otherwise been discontinued by identifying patient populations where these drugs are active. This allows the company to in-license these assets at low cost, which the company may then out-license after 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	5.1	(39.7)	(39.7)	(73.81)	N/A	N/A
2019e	2.4	(201.8)	(203.8)	(360.43)	N/A	N/A

Sector: Pharma & healthcare

Price: €0.98
Market cap: €50m
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	(1.3)	(16.9)	(14.8)
Relative*	1.8	(11.2)	(9.7)

* % 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)
2016	4.4	(21.3)	(20.4)	(44.64)	N/A	N/A
2017	9.5	(17.4)	(19.7)	(23.58)	N/A	N/A
2018e	2.6	(12.1)	(12.2)	(24.20)	N/A	N/A
2019e	3.9	(11.1)	(11.2)	(22.26)	N/A	N/A

Sector: Pharma & healthcare

Price: SEK57.90
Market cap: SEK2001m
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	(8.8)	32.3	35.6
Relative*	(5.5)	42.2	42.8

* % Relative to local index

Analyst

Andy Smith

Orexo (ORX)

INVESTMENT SUMMARY

Orexo generated positive EBITDA and operating cash flow generation in FY16 and FY17, and have guided for this to continue in 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. Zubsolv generics are precluded before September 2032 and other patent cases against Actavis are ongoing. The EMA has approved Zubsolv for Europe, and partner Mundipharma launched in Q218 with the SEK30.6m milestone now in our model. EU Zubsolv royalties are expected to start materially in Q418. Orexo's focus now shifts to business development, M&A and sales force leverage.

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)
2016	705.9	51.7	35.6	84.00	68.9	N/A
2017	643.7	57.4	29.7	67.00	86.4	N/A
2018e	860.7	170.6	163.4	537.68	10.8	N/A
2019e	948.6	197.7	154.1	432.10	13.4	N/A

Sector: Pharma & healthcare

Price: €3.00
Market cap: €117m
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)	(18.0)	50.0
Relative*	(2.7)	(14.7)	67.1

* % 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 has recently initiated and second Phase IIa trial in SCLC will initiate in the coming months.

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)
2016	5.0	(3.7)	(4.7)	(17.02)	N/A	N/A
2017	4.3	(3.5)	(4.6)	(14.29)	N/A	N/A
2018e	7.0	(4.7)	(5.6)	(9.23)	N/A	N/A
2019e	6.3	(6.4)	(7.3)	(18.56)	N/A	N/A

Sector: Pharma & healthcare

Price:	660.0p
Market cap:	£436m
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	(13.2)	(25.8)	57.7
Relative*	(12.2)	(19.9)	66.5

* % 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 interim profits 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 continue the rapid 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 also established development and manufacturing partnerships with Bioverativ, Sanofi & Orchard Therapeutics and continues to look to spin-out/out-license its internally developed, preclinical assets. As of 30 June, OXB had gross cash of £44.0m.

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)
2016	27.8	(7.6)	(20.0)	(29.35)	N/A	N/A
2017	37.6	(1.3)	(11.5)	(14.14)	N/A	N/A
2018e	74.3	15.5	3.8	4.80	137.5	24.7
2019e	85.1	18.3	4.6	5.65	116.8	27.3

Sector: Pharma & healthcare

Price:	NZ$0.41
Market cap:	NZ$195m
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	5.1	24.2	20.6
Relative*	5.2	28.7	13.8

* % 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 that the number of tests processed increased by 29% in FY18 and is guiding for 60% growth in FY19. 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. 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	4.8	(19.4)	(19.5)	(4.4)	N/A	N/A
2019e	7.8	(17.9)	(17.7)	(3.7)	N/A	N/A
2020e	12.7	(14.1)	(14.2)	(2.8)	N/A	N/A

Sector: Pharma & healthcare

Price:	€2.23
Market cap:	€142m
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	0.7	(3.7)	(14.6)
Relative*	4.5	3.9	(1.7)

* % 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 which combines the best features of approved agents midazolam and propofol. Partner Yichang Humanwell recently filed for approval of remimazolam in procedural sedation in China. Cosmo is on track to file for US approval in Q418 or Q119, having successfully completed clinical development in procedural sedation. Mundipharma is on track to file for approval in general anaesthesia (GA) in Japan towards year-end, and R-Pharm plans to file for approval in GA in Russia in Q119. 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, with top-line data expected in 2019. Cash of €19.8m at 30 September 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$3.01
Market cap:	US$439m
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	14.9	29.2	5.6
Relative*	18.0	34.1	(0.2)

* % 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	3.9	4.8
2017	320.1	218.8	200.3	81.33	3.7	11.5
2018e	189.4	71.8	66.1	46.11	6.5	N/A
2019e	126.9	31.9	34.9	20.65	14.6	N/A

Sector: Pharma & healthcare

Price: €1.04
Market cap: €231m
Market Madrid Stock Exchange

Share price graph (€)

Company description

PharmaMar is a Spanish biopharmaceutical group with a core focus on the development of marine-based drugs for cancer. Yondelis is approved in the EU and US, and partnered with Janssen (J&J) in the US and Taiho in Japan.

Price performance

%	1m	3m	12m
Actual	(16.7)	(36.3)	(57.1)
Relative*	(16.5)	(33.6)	(52.2)

* % Relative to local index

Analyst

Maxim Jacobs

PharmaMar (PHM)

INVESTMENT SUMMARY

PharmaMar has built a pipeline of first-in-class cancer drugs for development with strategic partners. The company presented promising Zepsyre data in small-cell lung cancer (SCLC) patients at ASCO. In a total of 61 patients, the objective response rate was 39.3% with a median duration of response of 6.2 months and median overall survival of 12 months. The 600-patient Phase III ATLANTIS study in relapsed SCLC patients has recently completed recruitment. Data from the ATLANTIS trial is expected around the end of 2019. The company recently announced its intention of listing in the US.

INDUSTRY OUTLOOK

PharmaMar's oncology portfolio has been validated through multiple global partnerships, eg J&J in the US and Taiho in Japan (for Yondelis).

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	164.0	(11.5)	(24.7)	(10.8)	N/A	N/A
2017	162.6	(8.2)	(22.7)	(12.0)	N/A	425.6
2018e	168.8	17.7	5.8	2.6	40.0	N/A
2019e	177.3	19.5	7.2	2.7	38.5	19.7

Sector: Pharma & healthcare

Price: NOK37.50
Market cap: NOK810m
Market AIM Italia, 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	(28.2)	(12.7)	47.6
Relative*	(24.7)	(9.9)	40.0

* % 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 current 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	22.9	42.0
2017	150.9	(33.1)	(41.6)	(161.0)	N/A	N/A
2018e	201.5	(1.8)	(14.7)	(40.0)	N/A	N/A
2019e	288.8	73.8	61.0	204.0	18.4	20.2

Sector: Pharma & healthcare

Price:	€1.90
Market cap:	€40m
Market	Euronext Paris

Share price graph (€)

Company description

Pixium Vision develops bionic retinal implants for patients with severe vision loss. A wireless sub-retinal implant (Prima), designed for Dry-ARMD patients, is in a human feasibility study in Europe and is expected to start a US feasibility study in Q218.

Price performance

%	1m	3m	12m
Actual	9.2	13.8	(33.8)
Relative*	12.7	21.6	(29.9)

* % Relative to local index

Analyst

Pooya Hemami

Pixium Vision (PIX)

INVESTMENT SUMMARY

Pixium Vision is developing the Prima wireless photovoltaic sub-retinal implant, which transforms images into electrical signals to elicit a form of central visual perception in patients with severe retinal disease. It announced in July 2018 the fifth and final human Prima implantation, as per the protocol of its European feasibility study, designed to assess Prima in patients with advanced atrophic Dry Age-related macular degeneration (ARMD). All five implantations were followed by successful activations (resulting in reported light perception). Pixium plans to start implantations as part of a five-patient US Prima feasibility study in Q418 or early 2019.

INDUSTRY OUTLOOK

In May 2018, Pixium raised €10.6m through the issuance of 5.68m new shares. Pixium held €16.7m in gross cash at 30 June 2018, which we estimate will fund operations through Q419. 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)
2016	2.5	(11.4)	(12.4)	(97.60)	N/A	N/A
2017	2.5	(11.4)	(13.2)	(99.55)	N/A	N/A
2018e	2.2	(6.4)	(7.1)	(40.45)	N/A	N/A
2019e	2.5	(14.4)	(17.1)	(83.34)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.10
Market cap:	US$127m
Market	NASDAQ, TASE

Share price graph (US$)

Company description

Pluristem is a biotech company, headquartered in Israel, focused on the development of cell-based therapeutics derived from placenta. The company is advancing PLX-PAD for critical limb ischemia (CLI) with a Phase III study on hip fracture. PLX-R18 is being advanced for acute radiation syndrome and hematopoietic cell transplant.

Price performance

%	1m	3m	12m
Actual	(7.6)	(11.3)	(29.5)
Relative*	(5.1)	(7.9)	(33.4)

* % Relative to local index

Analyst

Maxim Jacobs

Pluristem Therapeutics (PSTI)

INVESTMENT SUMMARY

Pluristem Therapeutics is developing allogenic cell therapies derived from donated placental tissue. The company is advancing PLX-PAD in its Phase III study of critical limb ischemia and recently reported data from its 172-patient Phase II study of intermittent claudication patients. Patients that received two injections of 300m cells showed a statistically significant improvement in maximal walking distance when compared to baseline (p=0.0008). Also, the company reported that the revascularization risk was reduced in this arm by 49% at week 65.

INDUSTRY OUTLOOK

Pluristem has been investigating the potential therapeutic benefit of cells derived from the placenta which offers a rich supply of cells of multiple lineages from tissue that would otherwise be medical waste. They secrete a wide array of cytokines and growth factors and can exert a potent influence on the function of other cells in the body.

Y/E Jun	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2017	0.0	(30.2)	(24.2)	(27.63)	N/A	N/A
2018	0.1	(35.7)	(19.6)	(18.48)	N/A	N/A
2019e	0.0	(48.2)	(43.9)	(38.36)	N/A	N/A
2020e	155.0	117.7	122.8	104.14	1.1	1.1

Sector: Pharma & healthcare

Price: €3.00
Market cap: €25m
Market Euronext Amsterdam

Share price graph (€)

Company description

Probiodrug is a German biopharmaceutical company developing drugs for AD. Lead product PQ912 has just completed a Phase IIa study with encouraging results. PQ912 is a small molecule inhibitor of glutaminyl cyclase (QC), which is essential for the formation of pGlu-Abeta. Two further products are in preclinical stages.

Price performance

%	1m	3m	12m
Actual	(6.0)	0.0	(76.5)
Relative*	(5.3)	6.5	(75.7)

* % Relative to local index

Analyst

Dr Jonas Peciulis

Probiodrug (PBD)

INVESTMENT SUMMARY

Probiodrug is developing a clinical pipeline focusing on the novel target of pGlu-Abeta, a toxic variant of amyloid-beta (Abeta) that has been implicated in the initiation and sustainment of the pathological cascade that leads to Alzheimer's disease (AD). Lead candidate PQ912 is an inhibitor of the enzyme glutaminyl cyclase, which is essential for the formation of pGlu-Abeta. Initial results from the Phase IIa study, SAPHIR, were reported on 12 June 2017. Probiodrug has presented detailed Phase IIb development with the next trial planned to start by end-2018, depending on financing. Preclinical data also showed that PQ912 could be effective in Huntington's disease in an animal model. Backup candidates are in pre-clinical stage: PBD-C06 (monoclonal antibody that targets pGlu-Abeta), and PQ1565 (small molecule QC enzyme inhibitor).

INDUSTRY OUTLOOK

There are 44m dementia sufferers worldwide, 60% of whom have AD. The lack of disease-modifying therapies leaves a vast unmet clinical need. This, combined with increasing understanding of the disease process and the development of biomarkers, has led to increased optimism that a disease-modifying therapy may be found.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.0	(13.7)	(13.8)	(181.30)	N/A	N/A
2017	0.0	(9.9)	(9.0)	(96.67)	N/A	N/A
2018e	0.0	(7.8)	(7.8)	(94.91)	N/A	N/A
2019e	0.0	(7.9)	(7.9)	(96.64)	N/A	N/A

Sector: Pharma & healthcare

Price: €3.73
Market cap: €50m
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	60.8	97.1	26.9
Relative*	65.9	110.8	34.4

* % 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. Importantly there was no oedema that was seen with some of the other major classes of hypertension treatments. The company is also launching a Phase IIb in heart failure in Q418 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

RedHill Biopharma (RDHL)

Sector: Pharma & healthcare

Price:	US$7.90
Market cap:	US$255m
Market	NASDAQ, TASE

Share price graph (US$)

Company description

RedHill Biopharma is a specialty pharma company with a broad R&D pipeline focusing on gastrointestinal and inflammatory diseases and also promotes four GI products in the US. The most advanced programs are TALICIA (RHB-105) for H. pylori infection, RHB-104 for Crohn's disease, BEKINDA for gastroenteritis and IBS-D, and RHB-204 for NTM.

Price performance

%	1m	3m	12m
Actual	(9.3)	28.5	54.3
Relative*	(6.9)	33.4	45.8

* % Relative to local index

Analyst

Dr Jonas Peciulis

INVESTMENT SUMMARY

RedHill has a broad R&D pipeline, but is focusing on GI and inflammatory diseases. The most advanced assets are TALICIA (RHB-105) for H. pylori infection (top-line results from confirmatory Phase III expected before end of 2018); RHB-104 for Crohn's disease (positive top-line results from first Phase III announced July 2018); BEKINDA for both gastroenteritis (positive results from first Phase III announced June 2017) and IBS-D (positive final Phase II results announced January 2018); and RHB-204 for pulmonary non-tuberculous mycobacteria infections (pivotal Phase III trial to start mid-2019). RedHill promotes four GI products in the US (Donnatal, EnteraGam, Esomeprazole Strontium DR Capsules 49.3mg and Mytesi). Q318 net revenues were $2.2m and cash position was $43m as of 30 September 2018.

INDUSTRY OUTLOOK

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

Y/E Dec	Revenue (US$m)	EBITDA (US$m)	PBT (US$m)	EPS (c)	P/E (x)	P/CF (x)
2016	0.1	(30.5)	(29.4)	(22.85)	N/A	N/A
2017	4.0	(51.9)	(45.5)	(25.99)	N/A	N/A
2018e	12.4	(39.1)	(39.2)	(16.72)	N/A	N/A
2019e	30.2	(36.6)	(36.7)	(14.36)	N/A	N/A

Regeneus (RGS)

Sector: Pharma & healthcare

Price:	A$0.20
Market cap:	A$42m
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	2.6	8.1	60.0
Relative*	5.3	19.1	65.5

* % Relative to local index

Analyst

Dr Dennis Hulme

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 a number of indications; the first Progenza clinical development licence deal is expected in Q418. Japanese legislation offers an accelerated path to market for regenerative medicines. Progenza therapy reduced osteoarthritis knee pain in Phase I. Regeneus was granted a US patent in July covering the composition and use of Progenza and 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	12.7	11.6
2018	0.6	(4.8)	(5.2)	(2.48)	N/A	N/A
2019e	7.8	2.3	2.2	1.04	19.2	18.2
2020e	1.6	(4.0)	(4.2)	(2.00)	N/A	N/A

Sector: Pharma & healthcare

Price:	60.5p
Market cap:	£19m
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	4.3	(35.0)	(70.5)
Relative*	5.5	(29.7)	(68.9)

* % 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 will be starting the placebo-controlled Phase IIb trial in chronic stroke disability in H218 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. 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.

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	3.9	(25.7)	(25.6)	(71.21)	N/A	N/A
2020e	1.0	(30.3)	(30.4)	(84.40)	N/A	N/A

Sector: Pharma & healthcare

Price:	€18.00
Market cap:	€1009m
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	14.6	6.8	6.3
Relative*	14.9	11.2	18.4

* % 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 is expected to read out data from its Phase III PRISMA trial in Q219.

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)
2016	265.2	39.3	30.3	58.11	31.0	38.3
2017	275.6	30.5	20.3	39.99	45.0	31.0
2018e	299.3	27.5	17.5	31.75	56.7	20.7
2019e	322.0	35.8	26.2	47.37	38.0	52.8

Sector: Pharma & healthcare

Price:	52.50PLN
Market cap:	PLN838m
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	(2.8)	(4.7)	7.4
Relative*	(0.5)	(0.5)	19.5

* % 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 H118 were PLN 37.3m (an increase of 19% from H117) and most of the growth continues to come 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. Recently, Selvita completed a share issue raising PLN134m, which will be a part of the total funds of PLN390m the company expects to invest until 2021 significantly ramping up its R&D activities.

INDUSTRY OUTLOOK

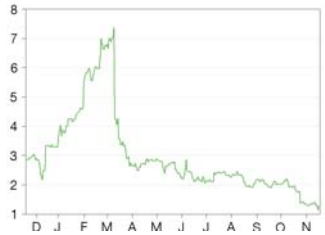
The profiles of SEL24 and SEL120 are potentially unique when compared to existing clinical-stage competitors and both candidates may offer efficacy advantages. Contract research is a fiercely competitive, but still rapidly growing market and we believe Selvita's geographical location and lower cost benefits 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	82.3	N/A
2017	105.9	18.5	10.2	50.76	103.4	70.6
2018e	101.3	(0.4)	14.3	91.04	57.7	N/A
2019e	116.8	1.9	(4.5)	(26.23)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$1.23
Market cap:	US$46m
Market	NASDAQ

Share price graph (US$)



Company description

Sunesis Pharmaceuticals is a pharmaceutical company focused on oncology. The company has developed SNS-062, a BTK inhibitor for CLL for Imbruvica refractory patients currently in Phase I/II.

Price performance

%	1m	3m	12m
Actual	(36.9)	(40.3)	(55.6)
Relative*	(35.2)	(38.0)	(58.0)

* % Relative to local index

Analyst

Maxim Jacobs

Sunesis Pharmaceuticals (SNSS)

INVESTMENT SUMMARY

Sunesis is a pharmaceutical company developing small molecule oncology drugs. Its lead programme is SNS-062, 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 entering 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)	(28.8)	(81.03)	N/A	N/A
2019e	0.0	(30.4)	(34.9)	(93.92)	N/A	N/A

Sector: Pharma & healthcare

Price:	¥204.00
Market cap:	¥15888m
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	(9.7)	74.4	(7.7)
Relative*	(6.5)	80.6	(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 22% in H1 2018, following 61% growth in 2017 (NHI price basis). SymBio has initiated a Phase III trial in Japan of Treakisym in r/r diffuse large B-cell lymphoma, and has in-licensed liquid formulations for injection that will provide Treakisym with patent protection to 2031. A Phase I trial of oral Treakisym commenced in January. SymBio has filed for approval of Treakisym as a CAR-T pre-treatment. 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)
2016	2368.0	(2101.0)	(2317.0)	(59.0)	N/A	528.0
2017	3444.0	(3917.0)	(3977.0)	(79.8)	N/A	830.6
2018e	4203.0	(3004.0)	(3030.0)	(54.2)	N/A	277.7
2019e	4325.0	(3591.0)	(3636.0)	(62.9)	N/A	674.3

Sector: Pharma & healthcare

Price:	NOK7.73
Market cap:	NOK407m
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	(27.1)	(31.5)	(46.1)
Relative*	(23.6)	(29.3)	(48.9)

* % 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. Targovax's core proposition is to use its products as immune response primers and combine with other anticancer therapies, such as checkpoint inhibitors, for increased efficacy. 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 for colorectal and pancreatic cancers. Phase I/II data on TG02 in colorectal cancer is expected in H119, and Targovax is exploring options for further development of TG01 in various other indications.

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)
2016	0.0	(119.2)	(122.7)	(354.65)	N/A	N/A
2017	0.0	(119.6)	(122.3)	(258.06)	N/A	N/A
2018e	0.0	(142.6)	(140.8)	(267.42)	N/A	N/A
2019e	0.0	(140.7)	(141.0)	(267.13)	N/A	N/A

Sector: Pharma & healthcare

Price:	A$0.77
Market cap:	A$162m
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	(2.5)	3.4	0.7
Relative*	0.0	13.8	4.1

* % 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; the acquisition of Atlab in September strengthened its position in prostate cancer. Each product has been validated by clinical studies or compassionate use, reducing development risk. The ZIRCON confirmatory Phase III for kidney cancer imaging agent TLX250-CDx is due to commence in Q418 at the completion of a bridging study, and report in H219. The IPAX-1 Phase I/II study of TLX101 therapy in GBM (brain cancer) commenced recruitment in October and is expected to read out in H219. Preparations for multiple Phase I/II studies of other agents are also underway. It is commercialising an investigational prostate cancer imaging kit in the US, including through Cardinal Health, and is developing plans for a pivotal study to allow full approval.

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. Endocyte is using Telix's prostate cancer imaging kit to screen patients for its VISION Phase III trial.

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$8.65
Market cap:	US$9m
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	78.0	124.7	78.7
Relative*	82.8	133.2	68.9

* % 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. In October, the company announced that they have signed a binding letter of intent with FSD Pharma to be acquired for $48m in stock. A definitive agreement is still pending but the company believes the transaction will close in Q119.

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:	€3.00
Market cap:	€187m
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	7.5	(1.3)	14.5
Relative*	11.0	5.5	21.3

* % Relative to local index

Analyst

Dr Daniel Wilkinson

Transgene (TNG)

INVESTMENT SUMMARY

Transgene is focused on the development of its cancer immunotherapy products in combination with immune checkpoint inhibitors (ICIs) and infectious disease programmes. The company is running 6 clinical trials, including a Phase 2 trial combining TG4010 with Opdivo and chemotherapy in 1L NSCLC, a Phase 1b/2 trail with Pexa-Vec+Opdivo in 1L advanced liver cancer and a Phase 1b/2 trial of TG4001 in HPV positive cancers in combination with avelumab. Transgene and partner Sillajen are running a global 600-patient Phase 3 study (PHOCUS) with Pexa-Vec+sorafenib in advanced liver cancer. Transgene has announced a strategic agreement with Tasly Biopharmaceuticals for full Greater China rights to T6002 and T1050 (receiving $48m in Tasly shares). Net cash at 30 September 2018 was €15.3m.

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)
2016	10.3	(20.4)	(23.1)	(42.9)	N/A	N/A
2017	8.1	(26.4)	(35.0)	(52.0)	N/A	N/A
2018e	7.2	(28.4)	(36.8)	(50.6)	N/A	N/A
2019e	7.9	(31.1)	(34.0)	(54.8)	N/A	N/A

Sector: Pharma & healthcare

Price:	US$2.28
Market cap:	US$81m
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	(19.1)	31.8	(37.4)
Relative*	(17.0)	36.8	(40.8)

* % 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. Readouts from 4,300 and 12,000+ sample studies are expected in H218 and Q119 respectively to support a CE Mark. Volition recently announced positive data from a pancreatic cancer study with Nu.Q™. Volition also recently secured new funding: $9m private placement, $8.4m (gross) through a registered public offering of common shares and $700k from the Walloon Regional Government. Volition's new partner Active Motif will begin to sell Nu.Q™ assay research kits which Volition hope will help to validate the assays and explore new indications.

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)
2016	0.0	(12.4)	(12.5)	(54.02)	N/A	N/A
2017	0.0	(15.0)	(15.1)	(57.29)	N/A	N/A
2018e	0.1	(16.9)	(17.0)	(54.33)	N/A	N/A
2019e	1.4	(17.2)	(17.3)	(53.40)	N/A	N/A

Company coverage

Company	Note	Date published
4SC	Update; Update	03/05/2018; 17/08/2018
Acacia Pharma	Update; Update	10/10/2018; 07/11/2018
Acarix	Update; Update	30/05/2018; 17/09/2018
AFT Pharmaceuticals	Update; Update	28/03/2018; 30/05/2018
ASIT biotech	Update; Update	27/09/2018; 20/11/2018
Atossa Genetics	Update; Update	26/04/2018; 15/06/2018
Auris Medical Holding	Initiation; Update	01/11/2018; 19/11/2018
Basilea Pharmaceutica	Outlook; Update	16/07/2018; 21/08/2018
Bio-Light Life Sciences	Update; Update	24/04/2018; 09/07/2018
BioPorto Diagnostics	Update; Update	03/10/2018; 09/10/2018
BONESUPPORT	Update; Update	03/08/2018; 16/11/2018
Brighter	Initiation	25/09/2018
Cantargia	Update; Update	13/09/2018; 30/10/2018
Carmat	Update; Update	21/12/2017; 26/10/2018
Cellular Biomedicine Group	Update; Update	04/04/2018; 05/10/2018
Celyad	Update; Update	21/06/2018; 02/08/2018
Clal Biotechnology Industries	Update; Update	06/06/2018; 23/08/2018
Deinove	Outlook; Update	01/09/2017; 23/10/2017
Destiny Pharma	Initiation; Update	04/09/2018; 01/10/2018
e-Therapeutics	Update; Update	23/04/2018; 08/10/2018
Elbit Medical Technologies	Initiation; Update	28/06/2018; 06/09/2018
Herantis Pharma	Initiation	20/09/2018
Hutchison China Meditech	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	ADR Update; Update	27/09/2018; 21/11/2018
InMed Pharmaceuticals	Update; Update	20/09/2018; 20/11/2018
International Stem Cell	Update; Update	06/06/2018; 20/08/2018
Kazia Therapeutics	ADR Update; Update	29/10/2018; 29/10/2018
MagForce	QuickView; Update	19/11/2018; 21/11/2018
Medigene	Update; QuickView	19/11/2018; 19/11/2018
Mesoblast	Update; Update	07/06/2017; 07/11/2017
MGC Pharmaceuticals	Initiation	22/10/2018
Mologen	Outlook; QuickView	21/09/2018; 19/11/2018
NetScientific	Update; Update	19/10/2018; 24/10/2018
NeuroVive Pharmaceutical	Update; Outlook	04/06/2018; 05/10/2018
Newron Pharmaceuticals	Update; QuickView	11/10/2018; 19/11/2018
Nuevolution	Outlook; Update	15/03/2018; 25/09/2018
Oncology Venture	Update; Update	13/09/2018; 09/10/2018
Onxeo	Outlook; Update	29/11/2017; 27/04/2018
Orexo	Outlook; Update	13/09/2018; 29/10/2018
Oryzon Genomics	Outlook; Update	18/07/2018; 09/11/2018
Oxford BioMedica	Update; Update	08/06/2018; 09/11/2018
Pacific Edge	Outlook; Update	09/01/2018; 04/06/2018
Paion	Update; QuickView	12/11/2018; 19/11/2018
PDL BioPharma	Update; Update	16/08/2018; 13/11/2018

PharmaMar	Update; Update	23/01/2018; 14/03/2018
Photocure	Update; Update	04/06/2018; 16/08/2018
Pixium Vision	Outlook; Update	08/03/2018; 09/08/2018
Pluristem Therapeutics	Update; Update	29/05/2018; 07/11/2018
Probiodrug	Outlook; QuickView	01/11/2018; 19/11/2018
Quantum Genomics	Update; Update	09/10/2018; 13/11/2018
Redhill Biopharma	Update; Update	08/08/2018; 02/10/2018
Regeneus	Outlook; Update	29/04/2018; 04/09/2018
ReNeuron Group	Update; Flash	13/07/2018; 20/07/2018
ROVI Laboratorios Farmaceuticos	Update; Update	30/07/2018; 14/11/2018
Selvita	Update; Update	16/04/2018; 29/06/2018
Sunesis Pharmaceuticals	Update; Update	17/08/2018; 09/11/2018
SymBio Pharmaceuticals	Outlook; ADR Outlook	06/04/2018; 09/04/2018
Targovax	Update; Update	13/06/2018; 21/11/2018
Telix Pharmaceuticals	Initiation; Update	20/08/2018; 31/10/2018
Therapix Biosciences	Update; Update	18/08/2017; 17/11/2017
Transgene	Outlook; QuickView	16/07/2018; 19/11/2018
VolitionRx	Update; Update	13/03/2018; 18/07/2018

Investment companies		
BB Biotech AG	Investment trust review	09/02/2016; 27/02/2017
Biotech Growth Trust (The)	Investment trust review	20/07/2016; 21/02/2017
International Biotechnology Trust	Investment trust review	03/03/2015; 11/12/2015
QuickViews		

To view the QuickViews we publish see the healthcare sector profile page on our website.

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Frankfurt+49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
295 Madison Avenue, 18th Floor
10017, New York
US

Sydney +61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia