



# EDISON



## Edison Healthcare Insight

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June 2016

Published by Edison Investment Research

**Lala Gregorek**



Lala joined Edison's healthcare team in January 2010 from Canaccord Adams, where the focus of her coverage as a life sciences analyst was on UK and European biotech stocks. Before graduating with an M.Phil in bioscience enterprise from Cambridge University, she worked in risk management as a credit analyst covering European financial institutions and hedge funds at Dresdner Kleinwort and Lehman Brothers.

**Maxim Jacobs**



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

**Pooya Hemami**



Pooya 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.

**Juan Pedro Serrate**



Juan joined Edison's Healthcare team in April 2016. A veterinarian by training, he has held business positions in the healthcare sector over the past 12 years. Juan has collaborated with independent equity research firms, specialising in fundamental analysis and valuations. For more than six years, he co-managed a seed capital fund in Spain that invested in biotech start-ups and projects. Earlier in his career, he was a research fellow at the Yale University School of Medicine. He has a Master's degree in biotechnology, as well as an MBA from IESE Business School.

**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.

**Linda Pomeroy**



Linda joined Edison in early 2016. She has co-founded an orthopaedic company, worked for a number of years as a consultant on various NHS projects, and previously worked at Numis Securities as a life sciences analyst. Linda has a PhD from Imperial College Business School and an MPhil in bioscience enterprise from the University of Cambridge.

**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.

**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.

**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).

**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.

**Dr Sushant Kumar**

Sushant joined Edison in March 2016. Previously, he was a partner at Mehta Partners and MP Asset Management. He is also the founder of a targeted oncology company and a board member and advisor to an anti-infective company. He earned his Ph.D. in Molecular Biology from Rutgers Medical School, at the Centre for Advanced Biotechnology & Medicine. During his academic tenure he was a post-doctoral fellow at Harvard Medical School and was awarded the American Cancer Society Fellowship.

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Prices at 17 June 2016

Published 23 June 2016

Welcome to the June edition of the Edison Healthcare Insight. In this edition we have profiled 77 of our healthcare companies under coverage.

We have recently initiated coverage on TxCell, Hutchison China MediTech, AFT Pharmaceuticals, Crossject and Akari Therapeutics.

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

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We welcome any [comments/suggestions](#) our readers may have.

**Lala Gregorek & Maxim Jacobs**

**Healthcare Research**

## Upcoming newsflow

Exhibit 1: Upcoming conferences			
Start Date	End Date	Conference	Location
<b>Jul-16</b>			
31 July 2016	04 August 2016	American Association of Clinical Chemistry Annual Meeting & Clinical Lab Expo	Philadelphia, PA
<b>Aug-16</b>			
10 August 2016	11 August 2016	Canaccord Genuity's Annual Growth Conference	Boston, MA
<b>Sep-16</b>			
05 September 2016		JMP Securities Biotech Day	Boston, MA
07 September 2016	08 September 2016	Baird Global Healthcare Conference	New York, NY
07 September 2016	08 September 2016	Citi 11th Annual Biotech Conference	Boston, MA
11 September 2016	13 September 2016	Rodman & Renshaw 18th Annual Global Investment Conference	New York, NY
13 September 2016	15 September 2016	BioPharm America 2016	Boston, MA
21 September 2016		Boston Biotech Conferences - Anti-Infectives Rx Conference	Boston, MA
26 September 2016		4th Annual Sachs MedTech & Digital Health Forum	Basel, Switzerland
27 September 2016	28 September 2016	16th Annual Sachs Biotech in Europe Investor Forum for Global Partnering & Investment	Basel, Switzerland
TBC		Bank of America Merrill Lynch Global Healthcare Conference	London, UK
TBC		Aegis Capital 2016 Healthcare Conference	Las Vegas, NV

Source: Edison Investment Research

## Performance tables

Exhibit 2: Risers and fallers, biotechnology subsector						
Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)
AKTX US Equity	Akari Therapeutics	NASDAQ CM	USD	14.61	172.06	140
ATHX US Equity	Athersys	NASDAQ CM	USD	2.19	184.76	83
PTX AU Equity	Prescient Therapeutics	ASE	AUD	0.09	9.73	32
TIG BB Equity	TiGenix	EN Brussels	EUR	0.92	209.89	26
PHO NO Equity	Photocure	Oslo	NOK	40.90	106.45	12
ACHN US Equity	Achillion Pharmaceuticals	NASDAQ GS	USD	8.63	1179.20	-2
RGS AU Equity	Regeneus	ASE	AUD	0.16	25.05	-9
PBD NA Equity	Probiobdrug AG	EN Amsterdam	EUR	19.50	164.56	-9
NANO FP Equity	Nanobiotix	EN Paris	EUR	16.32	289.28	-11
MF6 GY Equity	MagForce	Xetra	EUR	5.54	161.02	-15
IMU AU Equity	Imugene	ASE	AUD	0.01	11.68	-18
OPXA US Equity	Opexa Therapeutics	NASDAQ CM	USD	3.66	25.56	-18
MDG1 GY Equity	Medigene	Xetra	EUR	6.50	148.02	-20
CYAD BB Equity	Celyad	EN Brussels	EUR	40.95	432.41	-23
ALNEV FP Equity	Neovacs	EN Paris	EUR	0.86	32.30	-25
BAVA DC Equity	Bavarian Nordic A/S	Copenhagen	DKK	226.00	1065.92	-27
ERYP FP Equity	Erytech Pharma SA	EN Paris	EUR	20.97	188.73	-28
AGL LN Equity	Angle	London	GBP	64.00	70.46	-29
RENE LN Equity	ReNeuron Group	London	GBP	3.13	145.32	-39
MOR GY Equity	MorphoSys	Xetra	EUR	38.66	1163.32	-40
PRR AU Equity	Prima BioMed Ltd	ASE	AUD	0.05	72.61	-41
PHM SM Equity	PharmaMar	Soc.Bol SIBE	EUR	2.20	554.31	-41
ATNM US Equity	Actinium Pharmaceuticals	NYSE MKT LLC	USD	1.77	83.10	-42
BSLN SW Equity	Basilea	SIX Swiss Ex	CHF	69.30	852.21	-42
GTCL FP Equity	Gentical	EN Paris	EUR	4.42	78.00	-43
NWRN SW Equity	Newron Pharmaceuticals	SIX Swiss Ex	CHF	15.00	222.00	-43
VER LN Equity	Vernalis	London	GBP	39.25	303.91	-44
TNG FP Equity	Transgene	EN Paris	EUR	2.70	118.01	-45
ALHYG FP Equity	Hybrigenics	EN Paris	EUR	0.88	35.72	-45
VSC GY Equity	4SC	Xetra	EUR	2.53	54.41	-45
ONXEO FP Equity	Onxeo	EN Paris	EUR	2.70	124.15	-47
MGN GY Equity	Mologen AG	Xetra	EUR	2.58	66.13	-49
OXB LN Equity	Oxford BioMedica	London	GBP	4.52	179.84	-49
ALCAR FP Equity	CARMAT	EN Paris	EUR	30.00	202.13	-51
RXII US Equity	RXi Pharmaceuticals	NASDAQ CM	USD	2.15	14.08	-53
NRT AU Equity	Novogen	ASE	AUD	0.11	33.81	-58
BLRX US Equity	BioLineRx	NASDAQ CM	USD	0.84	47.17	-60
ETX LN Equity	e-Therapeutics	London	GBP	13.00	50.61	-69
MSB AU Equity	Mesoblast Limited	ASE	AUD	1.14	325.81	-72
ATOS US Equity	Atossa Genetics	NASDAQ CM	USD	0.32	12.42	-76
SNSS US Equity	Sunesis Pharmaceuticals	NASDAQ CM	USD	0.60	51.99	-78
THLD US Equity	Threshold Pharmaceuticals	NASDAQ CM	USD	0.41	29.11	-90
STEM US Equity	StemCells	NASDAQ CM	USD	0.57	6.64	-93
AFP AU Equity	AFT Pharmaceuticals	ASE	AUD	2.90	210.45	N/A
ORY SM Equity	Oryzon Genomics	Soc.Bol SIBE	EUR	2.80	90.38	N/A

Source: Edison Investment Research

**Exhibit 3: Risers and fallers, medTech subsector**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)
LSIC LN Equity	Lifeline Scientific inc	London	GBP	270.50	77.76	57
VLAU Equity	Viralytics Limited	ASE	AUD	1.03	183.24	38
C4XD LN Equity	C4X Discovery	London	GBP	104.00	49.75	24
PIX FP Equity	Pixium Vision	EN Paris	EUR	7.15	103.37	18
SBS GY Equity	Stratec Biomedical	Xetra	EUR	54.36	730.60	17
TRX LN Equity	Tissue Regenix	London	GBP	19.50	218.17	8
ALTHE FP Equity	Theraclion	EN Paris	EUR	7.69	42.06	-3
PEB NZ Equity	Pacific Edge	NZX	NZD	0.55	147.81	-11
VNRX US Equity	VolitionRx	NYSE MKT LLC	USD	3.44	80.50	-12
CERU US Equity	Cerulean	NASDAQ GM	USD	2.12	58.01	-54
EHP LN Equity	Epistem	London	GBP	90.00	13.99	-68
NXTMH FH Equity	Nexstim	FN Finland	EUR	0.70	6.44	-88
AMBS US Equity	Amarantus BioScience	OTC US	USD	0.05	3.71	-99

Source: Edison Investment Research

**Exhibit 4: Risers and fallers, specialty pharma subsector**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)
UDG LN Equity	UDG Healthcare	London	GBP	572.00	2073.99	18
CSRT LN Equity	Consort Medical	London	GBP	995.00	719.54	16
HCM LN Equity	Hutchison China Meditech Ltd	London	GBP	1952.50	1742.99	2
4582 JT Equity	SymBio Pharmaceuticals	Tokyo	JPY	251.00	93.00	-13
PA8 GY Equity	Paion	Xetra	EUR	1.85	106.35	-20
GWP LN Equity	GW Pharmaceuticals	London	GBP	511.00	1977.66	-22
ORX SS Equity	Orexo AB	Stockholm	SEK	45.00	189.08	-41
TXCL FP Equity	TxCell	EN Paris	EUR	4.38	64.58	-49
MTPH LN Equity	Midatech	London	GBP	126.50	62.31	-56
TNXP US Equity	Tonix Pharmaceuticals	NASDAQ GM	USD	1.94	48.65	-81
OREX US Equity	Orexigen Therapeutics	NASDAQ GS	USD	0.49	71.42	-90
ADR AU Equity	Adherium	ASE	AUD	0.49	55.53	N/A

Source: Edison Investment Research

**Exhibit 5: Risers and fallers, research services subsector**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)
BTH1V FH Equity	Biotie Therapies Corp	Helsinki	EUR	0.29	322.30	38
SLV PW Equity	Selvita	Warsaw	PLN	20.81	72.32	28
EVT GY Equity	Evotec	Xetra	EUR	3.69	555.94	6
ABZALN Equity	Abzena	London	GBP	45.00	90.73	-48
LIO1 GY Equity	Sygnis	Xetra	EUR	1.42	27.06	-57
ISCO US Equity	International Stem Cell	OTC US	USD	2.14	6.21	-69

Source: Edison Investment Research

**Exhibit 6: Risers and fallers, investment company subsector**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)
IVO LN Equity	Imperial Innovations	London	GBP	416.00	987.07	-10
PDLI US Equity	PDL BioPharma	NASDAQ GS	USD	3.06	506.55	-48

Source: Edison Investment Research

**Exhibit 7: Risers and fallers over the last 30 days**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD (Mns)	30-day performance (%)	Subsector
OPXA US Equity	Opexa Therapeutics	NASDAQ CM	USD	3.66	25.56	71	Biotechnology
VLAU AU Equity	Viralytics Limited	ASE	AUD	1.03	183.24	29	MedTech
SNSS US Equity	Sunesis Pharmaceuticals	NASDAQ CM	USD	0.60	51.99	26	Biotechnology
ATOS US Equity	Atossa Genetics	NASDAQ CM	USD	0.32	12.42	22	Biotechnology
OREX US Equity	Orexigen Therapeutics	NASDAQ GS	USD	0.49	71.42	21	Specialty pharma
AFP AU Equity	AFT Pharmaceuticals	ASE	AUD	2.90	210.45	N/A	Biotechnology
STEM US Equity	StemCells	NASDAQ CM	USD	0.57	6.64	-81	Biotechnology
MSB AU Equity	Mesoblast Limited	ASE	AUD	1.14	325.81	-40	Biotechnology
NXTMH FH Equity	Nexstim	FN Finland	EUR	0.70	6.44	-26	MedTech
4582 JT Equity	SymBio Pharmaceuticals	Tokyo	JPY	251.00	93.00	-24	Specialty pharma

Source: Edison Investment Research

**Exhibit 8: Risers and fallers over the last 90 days**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD (Mns)	90-day performance (%)	Subsector
OPXA US Equity	Opexa Therapeutics	NASDAQ CM	USD	3.66	25.56	69	Biotechnology
VLAU AU Equity	Viralytics Limited	ASE	AUD	1.03	183.24	57	MedTech
ALTHE FP Equity	Theraclion	EN Paris	EUR	7.69	42.06	32	MedTech
SBS GY Equity	Stratec Biomedical	Xetra	EUR	54.36	730.60	29	MedTech
ACHN US Equity	Achillion Pharmaceuticals	NASDAQ GS	USD	8.63	1179.20	19	Biotechnology
AFP AU Equity	AFT Pharmaceuticals	ASE	AUD	2.90	210.45	N/A	Biotechnology
STEM US Equity	StemCells	NASDAQ CM	USD	0.57	6.64	-81	Biotechnology
MSB AU Equity	Mesoblast Limited	ASE	AUD	1.14	325.81	-56	Biotechnology
ISCO US Equity	International Stem Cell	OTC US	USD	2.14	6.21	-46	Research services
NXTMH FH Equity	Nexstim	FN Finland	EUR	0.70	6.44	-39	MedTech

Source: Edison Investment Research

**Exhibit 9: Risers and fallers over the last 12 months**

Ticker	Company	Exchange	Currency	Share Price	Market Cap in USD	12-month performance (%)	Subsector
AKTX US Equity	Akari Therapeutics	NASDAQ CM	USD	14.61	172.06	140	Biotechnology
ATHX US Equity	Athersys	NASDAQ CM	USD	2.19	184.76	83	Biotechnology
LSIC LN Equity	Lifeline Scientific inc	London	GBP	270.50	77.76	57	MedTech
VLAU AU Equity	Viralytics Limited	ASE	AUD	1.03	183.24	38	MedTech
BTH1V FH Equity	Biotie Therapies Corp	Helsinki	EUR	0.29	322.30	38	Research services
AFP AU Equity	AFT Pharmaceuticals	ASE	AUD	2.90	210.45	N/A	Biotechnology
ORY SM Equity	Oryzon Genomics	Soc.Bol SIBE	EUR	2.80	90.38	N/A	Biotechnology
ADR AU Equity	Adherium	ASE	AUD	0.49	55.53	N/A	Specialty pharma
AMBS US Equity	Amarantus BioScience	OTC US	USD	0.05	3.71	-99	MedTech
STEM US Equity	StemCells	NASDAQ CM	USD	0.57	6.64	-93	Biotechnology

Source: Edison Investment Research

## Company profiles

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Prices at 17 June

*US\$/£ exchange rate: 0.6913*

*€/£ exchange rate: 0.7769*

*C\$/£ exchange rate: 0.5334*

*A\$/£ exchange rate: 0.5045*

*NZ\$/£ exchange rate: 0.4750*

*SEK/£ exchange rate: 0.0835*

*DKK/£ exchange rate: 0.1044*

*NOK/£ exchange rate: 0.0834*

*JPY/£ exchange rate: 0.0064*

*NIS/£ exchange rate: 0.1793*

*CHF/£ exchange rate: 0.7058*



**Sector: Pharma & healthcare**

Price: €2.48  
Market cap: €47m  
Market: FRA

**Share price graph (€)**

**Company description**

4SC is a Munich-based cancer R&D company. Epigenetic compound resminostat (HDAC inhibitor) is the lead candidate for CTCL (Phase II planned in H116) and partnered with Yakult Honsha and Menarini. Partners for two Phase I assets are sought.

**Price performance**

%	1m	3m	12m
Actual	(17.2)	(29.0)	(44.9)
Relative*	(15.0)	(27.1)	(37.2)

\* % Relative to local index

**Analyst**

Linda Pomeroy

## 4SC (VSC)

**INVESTMENT SUMMARY**

4SC is focused on initiating a potentially pivotal 150-patient Phase II study in Europe with epigenetic compound resminostat (HDAC inhibitor) for cutaneous T-cell lymphoma (CTCL). The trial is due to start mid-2016, with initial data expected by end-2018. Resminostat has been licensed to Yakult Honsha (Japan) and Menarini (rest of Asia-Pacific), regions that account for 75% of liver cancer cases. Recently, Yakult announced that it did not reach the primary endpoint in its Phase II Asian liver cancer trial with all-comer patients and would not be progressing to a pivotal study. This does not impact the Phase II study in CTCL in Europe and further clinical trials are ongoing in Japan in NSCLC, pancreatic and bile duct cancer. Other positives include a recent partnership with Link Health in China for its oncology Eg5 inhibitor, 4SC-205 and promising preclinical data presented at ASCO for its epigenetic HDAC/LSD1 inhibitor (4SC-202). 4SC held €17.1m in cash (gross) at Q116, following a €29m equity issue (7.25m shares at €4.00) in July 2015.

**INDUSTRY OUTLOOK**

Resminostat could become the first HDAC inhibitor to gain EU approval for CTCL (vs four HDACs approved in the US). CTCL has been validated as a target indication for HDACs, with vorinostat (Merck & Co) and romidepsin (Celgene) FDA-approved on Phase II data.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2013	4.9	(7.8)	(8.0)	(80.0)	N/A	N/A
2014	7.1	(8.3)	(8.8)	(88.0)	N/A	N/A
2015e	3.3	(7.9)	(8.4)	(59.0)	N/A	N/A
2016e	3.8	(11.3)	(11.4)	(60.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 45.0p  
Market cap: £62m  
Market: AIM

**Share price graph (p)**

**Company description**

Abzena offers services/technologies to develop better biopharmaceuticals. Antitope, PolyTherics, PacificGMP and TCRS are the main business units.

**Price performance**

%	1m	3m	12m
Actual	(4.3)	(10.0)	(47.7)
Relative*	(1.9)	(7.4)	(42.3)

\* % Relative to local index

**Analyst**

Linda Pomeroy

## Abzena (ABZA)

**INVESTMENT SUMMARY**

Abzena offers fully integrated research and manufacturing services/technologies that enable its customers to develop safer and more effective biological products. This includes immunogenicity assessment, protein/antibody engineering, bioconjugation, biomanufacturing (PacificGMP) and chemistry/conjugation (TCRS). Fee-for-services provides stable revenues today (FY16 £9.9m), while successful commercialisation of products created using Abzena's technologies offers the prospect of substantial future revenues (small % royalties); 11 such products are now in the clinic, eg Gilead's GS-5745 (Phase III for gastric cancer), simtuzumab (Phase II for NASH and PSC) and Roche's SDP015. Also, ADC linker technology (ThioBridge) has recently been validated by a licensing deal with Halozyme for up to three such ADC products. PacificGMP (£5.5m) and TCRS (£10m) acquisitions enable a fully integrated offering which has created a US wide operating presence and cross selling opportunities across the expanded group.

**INDUSTRY OUTLOOK**

The biological services industry is highly competitive but Abzena's deepening portfolio of technologies and services is compelling, while its ADC technology offers safety and efficacy advantages over competitors.

Y/E Mar	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2015	5.7	(4.5)	(4.7)	(5.89)	N/A	N/A
2016	9.9	(7.0)	(7.5)	(6.00)	N/A	N/A
2017e	19.1	(5.4)	(6.8)	(4.35)	N/A	N/A
2018e	25.0	(2.9)	(4.2)	(2.65)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$8.52  
 Market cap: US\$1164m  
 Market: NASDAQ

**Share price graph (US\$)**



**Company description**

Achillion is engaged in the discovery and development of treatments for chronic HCV and progressing compounds from its research platform in its novel factor D programme. It is collaborating with J&J to develop and commercialise its HCV franchise, including a triple-regimen treatment, which is potentially best in class.

**Price performance**

%	1m	3m	12m
Actual	6.4	21.4	(1.6)
Relative*	5.1	19.6	(0.2)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Achillion Pharmaceuticals (ACHN)

**INVESTMENT SUMMARY**

Achillion, with partner Janssen, is the only company with candidates in three classes of HCV, and is well placed to develop an oral, once-a-day, single pill treatment more competitive than leader Harvoni. The company is undergoing a Phase IIa study by Janssen to evaluate the combination of AL-335, Odalasvir (ACH-3102), and Simeprevir in genotype 1 HCV. Achillion is well funded to progress its oral factor-D programme in rare diseases, such as PNH and myasthenia gravis, as well as in larger market opportunities including dry AMD. Phase I results with its factor-D candidate, ACH-4471, were presented at the EHA meeting in June. A Phase II is planned in PNH in Q316 with results by year end. We are reviewing our forecasts.

**INDUSTRY OUTLOOK**

More than 150m people are infected with HCV worldwide. Treatment has been transformed in recent years by the approval of Sovaldi (sofosbuvir) and Gilead's combination product; recent pressure from key healthcare groups has led to a drop in HCV prices.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(61.7)	(61.7)	(62.8)	N/A	N/A
2015	66.1	(4.3)	(3.9)	(3.1)	N/A	240.8
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$1.80  
 Market cap: US\$85m  
 Market: NYSE MKT

**Share price graph (US\$)**



**Company description**

Actinium Pharmaceuticals develops drugs for the treatment of various cancers. Actimab-A is in Phase I/II clinical trials for AML. Iomab-B is used for myeloconditioning for hematopoietic stem cell transplantation.

**Price performance**

%	1m	3m	12m
Actual	4.7	(5.3)	(30.0)
Relative*	3.4	(6.7)	(29.0)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Actinium Pharmaceuticals (ATNM)

**INVESTMENT SUMMARY**

Actinium Pharmaceuticals is actively developing its portfolio of radio-labelled antibodies to treat various cancers. Its lead product, Iomab-B, is poised to start the pivotal Phase III trial for use as a conditioning agent before hematopoietic stem cell therapy (HSCT, bone marrow transplantation) in refractory/relapsing acute myeloid leukaemia (AML). Actimab-A has completed the Phase I element of a Phase I/II trial in older patients with newly diagnosed AML and is expected to enter the Phase II portion in mid-2016. Our forecasts are under review.

**INDUSTRY OUTLOOK**

Actinium Pharmaceuticals' targeted radiation therapies (both alpha- and beta-particle based) offer the potential of highly selective tumour cell killing with low damage to the surrounding normal tissue and limited side effects. The company aims to combine the drug delivery capabilities of antibodies with the cell-killing effect of radiation.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(22.4)	(22.5)	(90.2)	N/A	N/A
2015	0.0	(24.8)	(24.8)	(54.2)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.50  
 Market cap: A\$58m  
 Market: ASX

**Share price graph (A\$)**



**Company description**

Adherium is a digital health company developing technologies that address suboptimal medication use and remote patient management in chronic diseases. Clinical evidence shows that its Smartinhaler substantially increases adherence and reduces severe exacerbations in asthma.

**Price performance**

%	1m	3m	12m
Actual	0.0	1.0	N/A
Relative*	4.0	0.6	N/A

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Adherium (ADR)

**INVESTMENT SUMMARY**

Adherium has developed the market-leading Smartinhaler platform that monitors usage of inhaled asthma and COPD medications and provides reminders and feedback on medication usage patterns. Independent clinical studies have shown that the Smartinhaler reminders and feedback improve patient adherence and reduce severe exacerbations in asthma patients. AstraZeneca has initiated a US clinical study that aims to confirm that the platform similarly improves adherence in COPD patients. Adherium is positioned for strong revenue growth through an existing commercial relationship with AstraZeneca and strong relationships with other pharma companies and key opinion leaders through sales for clinical trials. With A\$29m cash at 31 March 2016, Adherium has the resources to pursue an intensive growth and investment programme.

**INDUSTRY OUTLOOK**

Adherium has the benefit of 14 years of experience in developing and trialing Smartinhaler devices. Several competitors have entered the field more recently, but none of the competitors can match the independent clinical trials showing the efficacy of the Adherium device in improving adherence and reducing exacerbations.

Y/E Mar / Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.6	(2.1)	(2.1)	(3.16)	N/A	N/A
2015	3.1	(1.1)	(1.3)	(1.92)	N/A	32600.0
2016e	3.2	(6.1)	(6.1)	(4.76)	N/A	N/A
2017e	7.3	(10.1)	(9.7)	(6.78)	N/A	N/A

**Sector: Pharma & healthcare**

Price: NZ\$3.15  
 Market cap: NZ\$305m  
 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	5.0	10.5	N/A
Relative*	7.5	7.2	N/A

\* % Relative to local index

**Analyst**

Maxim Jacobs

## AFT Pharmaceuticals (AFT)

**INVESTMENT SUMMARY**

AFT Pharmaceuticals is a New Zealand-based specialty pharmaceutical company that currently sells 130 prescription specialty generics and OTC products through its own sales force in New Zealand, Australia and South-East Asia and has been expanding its geographic footprint. AFT has agreements in 109 countries to distribute Maxigesic, its combination acetaminophen/ibuprofen product, which is addressing a \$10.4b market. AFT is also developing a handheld device called SURF Nebuliser, which is able to deliver therapies intranasally, with a main focus on the conscious sedation market (though initially it is targeting the smaller sinusitis surgery market). It expects to meet with the FDA later this year, with clinical studies initiating soon thereafter. The addressable market for conscious sedation in the US alone is US\$3bn.

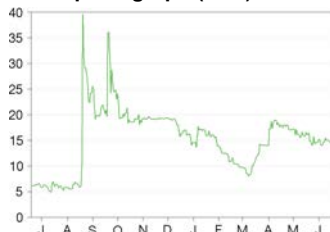
**INDUSTRY OUTLOOK**

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 (fd) (c)	P/E (x)	P/CF (x)
2015	56.2	(9.7)	(11.4)	(1099.7)	N/A	N/A
2016	64.0	(7.8)	(10.8)	(48.5)	N/A	N/A
2017e	77.4	(9.2)	(11.1)	(40.2)	N/A	N/A
2018e	105.4	4.3	2.5	6.4	49.2	279.5

**Sector: Pharma & healthcare**

Price: US\$14.61  
 Market cap: US\$172m  
 Market: NASDAQ

**Share price graph (US\$)**

**Company description**

Akari Therapeutics is a biopharmaceutical company developing Coversin, a complement system inhibitor for the treatment of paroxysmal nocturnal hemoglobinuria (PNH), atypical hemolytic uremic syndrome (aHUS), and other immune disorders without a standard of care.

**Price performance**

%	1m	3m	12m
Actual	(9.5)	24.0	143.5
Relative*	(10.5)	22.2	146.9

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Akari Therapeutics (AKTX)

**INVESTMENT SUMMARY**

Akari is biopharmaceutical company advancing the clinical development of Coversin, a complement inhibitor derived from the saliva of a species of tick. Coversin shares a mechanism of action with the \$2.59bn drug Soliris (Alexion, 2015 sales), and the company will be seeking approval for the same ultra-rare autoimmune hemolytic disorders as Soliris, as well as two other immune disorders without current treatments. The drug is currently in a dose ranging study and has successfully stabilized a Soliris resistant PNH patient in a Phase II trial. Akari plans to initiate three Phase II programs in 2016. We currently value Akari at \$23.17 per ADS.

**INDUSTRY OUTLOOK**

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	0.0	(11.3)	(49.0)	(573.3)	N/A	N/A
2016e	0.0	(24.4)	(22.5)	(183.6)	N/A	N/A
2017e	0.0	(49.0)	(49.8)	(383.8)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 64.5p  
 Market cap: £48m  
 Market: AIM

**Share price graph (p)**

**Company description**

Angle is a pure-play specialist diagnostics company. The proprietary Parsortix cell separation platform can be used to detect and harvest very rare cells from a blood sample, including circulating tumour cells.

**Price performance**

%	1m	3m	12m
Actual	(1.5)	(8.5)	(29.1)
Relative*	0.9	(5.9)	(21.9)

\* % Relative to local index

**Analyst**

Jonas Peculis

## Angle (AGL)

**INVESTMENT SUMMARY**

Angle's proprietary Parsortix cell separation platform can be used to detect and harvest circulating tumour cells (CTCs) from blood. Recently, Angle has announced results from two clinical studies carried out by their KOL partners. The initial data show that Parsortix performs as well as or better than current standard of care in detecting early-stage prostate cancer and assessing its severity and could potentially replace invasive tissue biopsy in metastatic breast cancer. Parsortix's potential third application is for triaging women with ovarian masses before surgery, with the clinical trial due to start shortly. In May, the company announced that Cancer Research UK Manchester Institute is adopting Parsortix for routine research use, which will provide recurring sales. Recently Angle has raised net £9.6m, which adds safety margin to reach profitability, in our view.

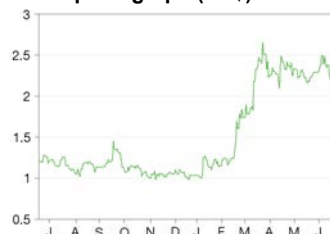
**INDUSTRY OUTLOOK**

The precision medicine approach is a key initiative aiming to improve treatment efficacy and outcomes by tailoring the treatment to the patient and their disease. CTCs provide information about the individual's cancer, which can be used for prognostic, diagnostic and treatment stratification purposes.

Y/E Apr	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	0.0	(2.0)	(2.0)	(2.39)	N/A	N/A
2015	0.0	(3.5)	(3.6)	(7.50)	N/A	N/A
2016e	0.3	(5.1)	(5.2)	(8.50)	N/A	N/A
2017e	2.2	(3.1)	(3.2)	(5.12)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$2.16  
Market cap: US\$182m  
Market: NASDAQ

**Share price graph (US\$)**

**Company description**

Athersys is a US biotech company developing MultiStem (allogeneic, bone marrow-derived stem cells). A Phase II trial with MultiStem in ischaemic stroke is complete, while further studies in AMI (Phase II) and ARDS (Phase IIa) are planned.

**Price performance**

%	1m	3m	12m
Actual	0.0	(12.6)	77.0
Relative*	(1.2)	(13.8)	79.5

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Athersys (ATHX)

**INVESTMENT SUMMARY**

Athersys is developing MultiStem, an allogeneic, bone marrow-derived stem cell product. Results from a 140-patient Phase II study in ischaemic stroke revealed a potential benefit when dosed <36 hours post stroke (vs 3-5 hours with tPA), although the primary/secondary endpoints were not met on an intent-to-treat basis. Athersys is assessing next development steps and recently signed a partnership agreement with Healios in Japan for stroke and other indications. Discussions with the Japanese PMDA on the design for a pivotal trial are ongoing. A Phase II trial with MultiStem in acute myocardial infarction is underway as is a Phase IIa study for acute respiratory distress syndrome (ARDS). We are reviewing our forecasts.

**INDUSTRY OUTLOOK**

MultiStem is an allogeneic (off-the-shelf) product that allows it to be used in both acute and chronic treatment settings, and holds potential to be used across a range of indications. Regenerative medicine is gaining traction and recognition by global regulators (eg accelerated approval pathway in Japan).

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	1.6	(29.3)	(28.9)	(37.26)	N/A	N/A
2015	11.9	(17.5)	(17.2)	(20.93)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$0.29  
Market cap: US\$11m  
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	3.6	(10.2)	(76.8)
Relative*	2.4	(11.6)	(76.5)

\* % Relative to local index

**Analyst**

Pooya Hemami

## Atossa Genetics (ATOS)

**INVESTMENT SUMMARY**

Atossa is advancing its proprietary intraductal microcatheter (IDMC), intended to selectively introduce drug to breast ducts, potentially improving drug targeting for chemotherapy. It plans to combine its IDMC with established cancer drug fulvestrant and opened enrolment for a 30-patient Phase II study in March 2016. Atossa is also developing afimoxigene topical gel (AFTG), intended to provide transdermal selective estrogen receptor modulation (SERM) to the breast area while reducing the adverse events associated with oral SERM drugs such as tamoxifen. In June 2016, Atossa started advancing oral endoxifen, a metabolite of tamoxifen, as a potential treatment for breast cancer patients refractory to tamoxifen.

**INDUSTRY OUTLOOK**

For both AFTG and the IDMC-fulvestrant programmes, development may also hinge on future FDA guidance on whether the projects can fall under the 505(b)2 development pathway, which would reduce the breadth of clinical data needed to support a marketing application. Atossa filed a legal complaint against Besins in early 2016 claiming Besins' own AFTG development plans infringes its rights. Atossa's AFTG work is on hold pending resolution of this dispute.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(6.9)	(7.3)	(30.5)	N/A	N/A
2015	0.0	(9.5)	(9.8)	(34.3)	N/A	N/A
2016e	0.0	(11.3)	(11.5)	(31.2)	N/A	N/A
2017e	0.0	(14.1)	(14.6)	(36.9)	N/A	N/A

**Sector: Pharma & healthcare**

Price: CHF66.75  
 Market cap: CHF788m  
 Market Swiss Stock Exchange

**Share price graph (CHF)**

**Company description**

Basilea is a Swiss biopharmaceutical company focused on anti-infectives and oncology. Its lead products are Cresemba, antifungal that is approved in the US and Europe and Zevtera, an anti-MRSA broad-spectrum antibiotic, approved in Europe for pneumonia.

**Price performance**

%	1m	3m	12m
Actual	(7.2)	(4.9)	(45.3)
Relative*	(4.8)	(3.1)	(36.9)

\* % Relative to local index

**Analyst**

Dr Susie Jana

## Basilea Pharmaceutica (BSLN)

**INVESTMENT SUMMARY**

Basilea is one of the few standalone European companies focused on developing novel antimicrobial drugs. It has two approved hospital-based products: Cresemba for severe mold infections and Zevtera for bacterial infections. Zevtera should enter US phase III development late 2016/early 2017 following discussions with FDA on PIII (seeking SPA) and the award of a BARDA (division of US Dept. of Health & Human Services Office) contract up to \$100m for its phase III development. Basilea's earlier-stage oncology pipeline focuses on drugs that target resistance to current cancer therapies. BAL101553 is being developed as a tumor checkpoint controller and recently presented final phase I/IIa data at ASCO. BAL3833, a panRAF kinase inhibitor, is in Phase I development.

**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)
2014	42.6	(39.2)	(41.2)	(414.46)	N/A	N/A
2015	52.8	(58.9)	(61.3)	(607.22)	N/A	N/A
2016e	59.3	(56.1)	(63.3)	(580.77)	N/A	N/A
2017e	84.9	(38.1)	(45.0)	(404.06)	N/A	N/A

**Sector: Pharma & healthcare**

Price: DKK221.50  
 Market cap: DKK6851m  
 Market NASDAQ OMX Mid Cap

**Share price graph (DKK)**

**Company description**

Bavarian is a Danish biotech focused on developing and manufacturing novel cancer immunotherapies and vaccines for infectious diseases. Its lead products are Prostavac (prostate cancer) partnered with BMS and Imvamune (smallpox).

**Price performance**

%	1m	3m	12m
Actual	(9.4)	(10.3)	(28.8)
Relative*	(5.0)	(6.6)	(27.2)

\* % Relative to local index

**Analyst**

Juan Pedro Serrate

## Bavarian Nordic (BAVA)

**INVESTMENT SUMMARY**

Bavarian Nordic has recently reported positive Phase I data of respiratory syncytial virus vaccine MVA-BN RSV which will start Phase II testing in H216. It also closed a DKK655m (gross) private placement with existing and new European and US investors in April. This fund raise replaces the proposed NASDAQ IPO which was shelved due to market conditions. Funds raised will be used to accelerate clinical development of multi-tumour cancer immunotherapy CV-301 and MVA-BN RSV and to expand its manufacturing capacity. In H216, the company will begin a Phase II trial of CV-301 in combination with nivolumab in lung cancer and will conduct interim analyses of Prostavac's Phase III trial, with final data expected in 2017. Smallpox vaccine Imvamune keeps generating revenues and has secured a \$100m order from the US government and a \$7.7m order from the Canadian government.

**INDUSTRY OUTLOOK**

Bavarian Nordic has expertise in both vaccines (with two technology platforms) and manufacturing (with a multipurpose, approved facility). The pipeline includes two Phase III assets (Prostavac and Imvamune) and is largely focused on cancer immunotherapy (Prostavac and CV-301) and infectious diseases (Imvamune/smallpox, RSV and Ebola).

Y/E Dec	Revenue (DKKm)	EBITDA (DKKm)	PBT (DKKm)	EPS (ore)	P/E (x)	P/CF (x)
2014	1217.0	62.0	110.0	27.3	811.4	16.8
2015	1021.0	48.0	80.0	22.4	988.8	78.9
2016e	1032.0	(119.0)	(112.0)	(38.6)	N/A	N/A
2017e	3057.0	1805.0	1753.0	542.2	40.9	6.5

**Sector: Pharma & healthcare**

Price: US\$0.81  
 Market cap: US\$46m  
 Market: NASDAQ, TASE

**Share price graph (US\$)**

**Company description**

BioLineRx is an Israel-based biotech company focused on the in-licensing and early development of therapeutics. It has a pipeline with six clinical and four preclinical candidates for a variety of indications.

**Price performance**

%	1m	3m	12m
Actual	(15.6)	(22.9)	(58.5)
Relative*	(16.6)	(24.0)	(57.9)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## BioLineRx (BLRX)

**INVESTMENT SUMMARY**

Lead cancer drug BL-8040 is in development for multiple oncology indications. At the end of March, the company reported positive top line Phase II results for BL-8040 in AML. A Phase IIa trial in two bone marrow failure conditions should yield interim results by end 2016.

BL-7010 is in development for coeliac disease, with EU classification as a medical device. A Phase II trial will start in 2016. Novel skin lesion product BL-5010 received CE-Mark approval in early April. BioLineRx also has strategic collaborations with Novartis (9% shareholder) to co-develop selected Israeli programmes and Merck to support a Ph II study of BL-8040 starting in mid-year 2016 with pembrolizumab in pancreatic cancer. Our forecasts are under review.

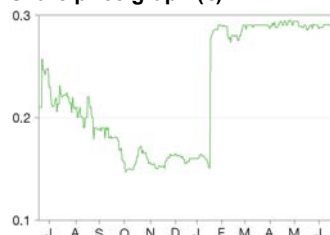
**INDUSTRY OUTLOOK**

BioLineRx was founded with the intent to provide development for early-stage assets in Israel, and holds a strong track record of in-licensing clinical candidates through its extensive long-term relationships with academic and research centres.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(15.9)	(13.0)	(0.31)	N/A	N/A
2015	0.0	(16.2)	15.9	(28.1)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €0.29  
 Market cap: €285m  
 Market: OMX

**Share price graph (€)**

**Company description**

Biotie Therapies is a Finnish/US biotech company focused on CNS disorders. Selincro for alcohol dependence is partnered with Lundbeck and launched in Europe. Parkinson's therapy tozadenant has entered Phase III; two other programmes are in Phase II studies.

**Price performance**

%	1m	3m	12m
Actual	1.8	1.4	53.4
Relative*	1.0	6.9	64.8

\* % Relative to local index

**Analyst**

Lala Gregorek

## Biotie Therapies (BTH1V)

**INVESTMENT SUMMARY**

Following conclusion of a second tender offer, Acorda Therapeutics has secured 97.36% shareholder acceptance for its all-cash tender offer for Biotie at €0.2946 per share, a 95% premium to the previous close price, valuing Biotie at €321m (ex options). Acorda has filed an application for compulsory redemption; this process will take place to ensure 100% ownership is achieved and is expected to complete in Q3. ADS have been delisted. Biotie is conducting a 450-patient pivotal Phase III study of tozadenant (A2a antagonist) in Parkinson's disease (PD), with results expected by end-2017. A Phase IIa study with SYN120 (dual 5HT6/5HT2a antagonist) in PD patients (n=80) with dementia, and a 41-patient Phase IIa study with BTT-1023 for primary sclerosing cholangitis are ongoing, with top-line data from both programmes expected by end 2016. Biotie receives a steady stream of royalties from alcohol dependence drug Selincro, partnered with Lundbeck across Europe (FY15: €3m in royalties).

**INDUSTRY OUTLOOK**

The Phase IIb data for tozadenant are robust and competitive against current and pipeline Parkinson's agents. Selincro is a new treatment concept for alcohol dependence, providing an alternative to complete abstinence, often not an attainable goal.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	14.9	(8.5)	(7.6)	(1.68)	N/A	N/A
2015	3.7	(29.3)	(28.3)	(3.83)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: 104.0p  
 Market cap: £34m  
 Market: AIM

**Share price graph (p)**



**Company description**

C4X Discovery is a UK business using its proprietary NMR-based technology to enable rational drug design, aimed at selecting safer and better drugs in a reduced timeframe. An OX1 receptor antagonist is the lead pre-clinical candidate.

**Price performance**

%	1m	3m	12m
Actual	6.1	5.1	23.8
Relative*	8.7	8.0	36.5

\* % Relative to local index

**Analyst**

Linda Pomeroy

## C4X Discovery Holdings (C4XD)

**INVESTMENT SUMMARY**

C4X Discovery's (C4XD) proprietary drug discovery platform allows the accurate measurement of molecular shapes in solution, enabling improved and accelerated drug discovery. It aims to become a highly efficient and productive discovery R&D engine; currently there are six programmes targeting validated clinical targets. The plan is to rapidly expand this to up to 15-20 new projects in the next three years. The Orexin programme, a selective OX1 antagonist, is the lead candidate, with Phase I anticipated by mid-2017. Recently acquired proprietary human genetic technology platform (Taxonomy3), broadens its drug discovery capabilities to both target identification and lead generation. Net cash of £5m at 31 January 2016 should be sufficient through to end-FY16.

**INDUSTRY OUTLOOK**

C4XD's NMR-based technology can be used to solve the 3-D conformations of biomolecules in solution, which the company believes will enable data-driven rational design of superior drug candidates, on a significantly faster timescale than conventional techniques, which should appeal to the global pharma industry. Existing partnerships (Evotec, AstraZeneca and Takeda) and the Structural Genomics Consortium collaboration provide external validation of the technology.

Y/E Jul	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (fd) (p)	P/E (x)	P/CF (x)
2014	0.6	(1.2)	(1.3)	N/A	N/A	N/A
2015	0.3	(3.8)	(3.8)	(10.75)	N/A	N/A
2016e	0.3	(7.1)	(7.0)	(17.77)	N/A	N/A
2017e	0.2	(8.2)	(8.3)	(20.33)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €29.98  
 Market cap: €178m  
 Market: Alternext Paris

**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	(12.1)	(14.1)	(51.9)
Relative*	(9.6)	(9.3)	(45.3)

\* % Relative to local index

**Analyst**

Pooya Hemami

## Carmat (ALCAR)

**INVESTMENT SUMMARY**

As part of the feasibility stage of the CE-mark approval process, Carmat's bioprosthetic heart was implanted in the required four patients. Discussions with regulators are underway for an EU pivotal study, planned to start in H216. The trial could be completed by 2018, potentially leading to CE-mark awarding and EU market entry in H218. In the US, Carmat's options for attaining regulatory approval include a humanitarian use device (HUD) approval or a broader pre-market approval (PMA) process, providing an addressable market of up to 50,000 US patients. Carmat raised €50m in equity in February 2016, which we estimate can finance operations into H118.

**INDUSTRY OUTLOOK**

The Carmat artificial heart is being developed as a permanent replacement or destination therapy (DT) for chronic heart failure or acute myocardial infarction patients, who do not have access to a human donor heart. Despite the high worldwide prevalence of heart failure (c 100,000 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 (fd) (c)	P/E (x)	P/CF (x)
2014	0.0	(19.4)	(20.3)	(414.06)	N/A	N/A
2015	0.0	(19.4)	(20.6)	(381.32)	N/A	N/A
2016e	0.0	(22.0)	(21.9)	(334.89)	N/A	N/A
2017e	0.0	(22.0)	(21.8)	(368.24)	N/A	N/A



**Sector: Pharma & healthcare**

Price: €40.24  
 Market cap: €375m  
 Market: Euronext Brussels

**Share price graph (€)**



**Company description**

Celyad is developing C-Cure, an autologous Phase III stem cell therapy for chronic ischaemic heart disease. An innovative cell cancer CAR T-cell therapy, NKG2D, is in Phase I.

**Price performance**

%	1m	3m	12m
Actual	(13.8)	0.6	(36.3)
Relative*	(13.5)	2.6	(32.0)

\* % Relative to local index

**Analyst**

Dr John Savin

## Celyad (CYAD)

**INVESTMENT SUMMARY**

Celyad has moved to the highest planned dose of 30 million cells in the important NKR-2 Phase II CAR trial. If this cell dose is also safe (and the Maximum Tolerated Dose) it will lead to two separate six patient open label studies in Acute Myeloid Leukemia and Multiple Myeloma. Further data is possible in late June. Efficacy indications in either of these could enable a series of solid tumor exploratory studies. The advantage of the NKR-T immuno-oncology approach is that it is easily transferred to multiple cancer types. FY15 accounts were as expected with year-end cash of €108m (\$122m).

**INDUSTRY OUTLOOK**

The crucial C-Cure CHART-1 cardiac regeneration data are expected at the end of June. The primary endpoint is a composite. The CHART-1 outcome will be fascinating and success would trigger the start of the part-US 240 patient Phase III CHART-2. Celyad aims to do a partnering deal, possibly to be signed in 2017. This will enable resources to be focused onto NKR-T development.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.1	(18.2)	(18.5)	(273.41)	N/A	N/A
2015	0.0	(28.6)	(28.4)	(326.28)	N/A	N/A
2016e	0.0	(32.8)	(32.5)	(349.65)	N/A	N/A
2017e	0.0	(37.7)	(37.7)	(405.50)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$2.10  
 Market cap: US\$57m  
 Market: NASDAQ

**Share price graph (US\$)**



**Company description**

Cerulean is an oncology company with a proprietary platform using NDCs. Lead product CRLX101 combined with Avastin is in Ph II trials in 3rd- and 4th-line RCC and 2nd- and 3rd-line ovarian cancer.

**Price performance**

%	1m	3m	12m
Actual	(8.7)	(1.4)	(54.6)
Relative*	(9.8)	(2.9)	(54.0)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Cerulean Pharma (CERU)

**INVESTMENT SUMMARY**

Cerulean is a US oncology company developing nanoparticle-drug conjugates (NDCs). Cerulean recently presented the results on the Phase II trial of CRLX101 with weekly paclitaxel for the treatment of platinum resistant ovarian cancer. The nine patient trial showed a 56% overall response rate (ORR). The company also reported data from the Phase I dose escalation trial of CRLX301 (docetaxel nanoparticle conjugate) for solid tumors. The primary purpose of the study was to determine the maximum tolerated dose, but six of the 13 patients evaluable for efficacy were stabilized during the study. Cerulean will announce critical results from a randomized Phase II trial for CRLX101 plus Avastin in metastatic renal cancer in Q316.

**INDUSTRY OUTLOOK**

CRLX101 represents a new approach to advanced RCC patients. Potential for CRLX101 is significant in mRCC, a cancer where c 30% of patients experience disease recurrence. There are limited treatment options for third/fourth-line use and little in development.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	0.1	(20.4)	(21.4)	(164.0)	N/A	N/A
2015	0.0	(37.4)	(39.6)	(156.0)	N/A	N/A
2016e	0.0	(40.0)	(40.4)	(148.0)	N/A	N/A
2017e	0.0	(42.3)	(42.7)	(152.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 987.0p  
 Market cap: £485m  
 Market: LSE

**Share price graph (p)**

**Company description**

Consort Medical is an international medical devices business. Having acquired Aesica Pharmaceuticals for £230m in 2014, it now consists of Bepak's operations (inhalation, injection and other drug delivery technologies) and Aesica's CDMO businesses.

**Price performance**

%	1m	3m	12m
Actual	3.7	(7.8)	7.6
Relative*	6.3	(5.1)	18.6

\* % Relative to local index

**Analyst**

Lala Gregorek

## Consort Medical (CSRT)

**INVESTMENT SUMMARY**

Consort Medical is a full-service contract development and manufacturing operation (CDMO) that operates across most areas of the pharmaceutical supply chain. Bepak's strength in high-margin disposable drug delivery devices is complemented by Aesica's services from drug manufacture to finished product packaging. Consort Medical capitalises on the growing trend for drug majors to outsource more of their non-core activities to specialist providers, as it addresses more of the development and manufacturing functions while also striving to build operational scale. Our forecasts are under review following FY16 preliminary results.

**INDUSTRY OUTLOOK**

Management has positioned Consort Medical to generate sustainable revenue and profit growth, with the latter targeted at a double-digit rate. Improvements in operating efficiencies, coupled with investment in innovation and development capabilities, has laid the foundation for establishing a broader range of contract services.

Y/E Apr	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2015	184.8	33.2	22.7	47.8	20.6	18.2
2016	276.9	47.6	32.3	57.2	17.3	10.4
2017e	N/A	N/A	N/A	N/A	N/A	N/A
2018e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €7.05  
 Market cap: €48m  
 Market

**Share price graph (€)**

**Company description**

Crossject develops new therapeutic entities (supergeneric) to be administered using its proprietary, needle-free injection system, ZENEO. Crossject has seven products in its development pipeline, including products for rheumatoid arthritis, anaphylactic shock, migraine and Parkinson's.

**Price performance**

%	1m	3m	12m
Actual	(11.0)	(17.4)	(3.4)
Relative*	(8.5)	(12.8)	9.8

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Crossject (ALCJ)

**INVESTMENT SUMMARY**

Crossject has developed a deep pipeline of products that are based on its proprietary needle-free injection system, ZENEO, across a variety of indications. The benefits of ZENEO include no need for needles, as well as a simple and quick (~1/10th of a second) delivery of the drug. Its first commercial product, ZENEO Methotrexate for rheumatoid arthritis, should reach the market in 2017. The next product to reach the market will likely be ZENEO Sumatriptan for the acute treatment of migraine, which is expected to be commercialised in H118. Crossject is also developing a product dubbed ZENEO L15, which is an undisclosed emergency product for a relatively niche market, and is expected to launch in H118.

**INDUSTRY OUTLOOK**

Traditional injections have multiple issues with them which inhibit patient acceptance. These often include: a multi-step injection process, difficulty in performing the injection correctly and convenience.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	1.7	(4.1)	(5.3)	(65.64)	N/A	N/A
2015	2.4	(5.5)	(6.7)	(85.33)	N/A	N/A
2016e	3.1	(5.0)	(5.4)	(61.57)	N/A	N/A
2017e	3.0	(8.5)	(9.7)	(104.51)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 13.0p  
Market cap: £35m  
Market: AIM

**Share price graph (p)**

**Company description**

e-Therapeutics is a drug discovery and development company with a proprietary network pharmacology discovery platform and a clinical pipeline (with potential to be out-licensed post-Phase II proof-of-concept trials).

**Price performance**

%	1m	3m	12m
Actual	(8.8)	5.1	(69.1)
Relative*	(6.5)	8.0	(65.9)

\* % Relative to local index

**Analyst**

Lala Gregorek

## e-Therapeutics (ETX)

**INVESTMENT SUMMARY**

e-Therapeutics is a leader in network pharmacology, an innovative approach to drug discovery. Significant progress has been made in industrialising its proprietary discovery platform and advancing its discovery projects. Company strategy has now evolved, shifting from investment into the platform to commercialisation of its 12 preclinical assets and the platform itself. Deals, potentially in the next 12-24 months, should validate the platform, as well as fund future discovery work, identifying the next wave of lead candidates. A key driver behind the discovery pipeline is commercial opportunity and unmet medical need; thus e-Therapeutics is focused on areas (such as cancer immunotherapy and therapeutic resistance rescue) in which it can identify differentiated and potentially disruptive assets, which should prove attractive to partners. The £2.32m acquisition of Searchbolt secures the company's IP, ensuring this is not a barrier to commercial deals.

**INDUSTRY OUTLOOK**

Network pharmacology could potentially revolutionise drug discovery and shorten the path to market by minimising technical risks and drug development costs. e-Therapeutics is well positioned, with limited direct competition and growing industry interest in systems biology-based multi-target approaches to drug discovery.

Y/E Jan	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2015	0.0	(10.0)	(9.7)	(2.9)	N/A	N/A
2016	0.0	(11.3)	(11.1)	(3.3)	N/A	N/A
2017e	0.0	(12.9)	(12.7)	(3.6)	N/A	N/A
2018e	0.0	(9.9)	(9.9)	(2.5)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 90.0p  
Market cap: £10m  
Market: AIM

**Share price graph (p)**

**Company description**

Epistem has a profitable contract services business and an emerging clinical biomarker technology. Epistem is launching Genedrive, its novel molecular diagnostic device, initially to private Indian clinics for TB testing.

**Price performance**

%	1m	3m	12m
Actual	0.0	(5.3)	(67.9)
Relative*	2.4	(2.6)	(64.6)

\* % Relative to local index

**Analyst**

Dr John Savin

## Epistem Holdings (EHP)

**INVESTMENT SUMMARY**

Epistem's Indian partner, Xcelris Labs, started sales of the Genedrive PCR system tuberculosis (TB) test in mid April. H116 revenues were £2m, with a loss of £3.6m and December 2015 cash of £2.3m. Revenues in FY15 in preclinical research were £2.3m, down from £2.9m as a US contract ended. Pharmacogenomics had FY15 sales of £1.8m, down from £2.4m. Diagnostic sales were £0.4m including £0.1m from Genedrive. Our forecasts are under review. David Budd has joined as the new CEO.

**INDUSTRY OUTLOOK**

Epistem believes Genedrive (a DNA-based diagnostic point-of-care system) will change the shape of DNA diagnostics, and is targeting 5,000 private laboratories. Epistem expects to report revenues of between £4.6m and £5.0m for FY16 (2015: £4.5m). Unaudited cash balances as at 31 May 2016 were £1.2m which the to fund the Company into the middle of Q316. The GHIF \$8m bond will be extended by two years to 21 July 2021 if Epistem raises £6m at 70p per share or more by 31 July 2016.

Y/E Jun	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	5.8	(1.6)	(2.3)	(17.4)	N/A	N/A
2015	4.5	(3.7)	(3.4)	(30.2)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €19.42  
 Market cap: €154m  
 Market: NYSE Euronext

**Share price graph (€)**

**Company description**

Erytech is a French oncology company with a red blood cell encapsulation technology. Lead product Graspas has successfully completed a Ph III ALL trial; a Ph IIb in AML is ongoing, in addition to a Ph II in pancreatic cancer.

**Price performance**

%	1m	3m	12m
Actual	(17.0)	(13.1)	(35.1)
Relative*	(14.7)	(8.2)	(26.2)

\* % Relative to local index

**Analyst**

Jonas Pecilius

## Erytech Pharma (ERYP)

**INVESTMENT SUMMARY**

Erytech's lead product, Graspas, has been filed in Europe for ALL following positive Phase III data. If approved by end 2016, first launches could be in 2017 with EU partner Recordati. In the US, where ALL development is ongoing, the strategy is evolving, with some protocol amendments potentially accelerating timelines. Additionally, the potential for earlier initial approval in the ultra-orphan indication of 'double-allergic' ALL patients. In December, Erytech completed a private placement of €22.7m (net) with cash position of €40.6m at end of Q116. These funds will help to broaden Eryasp's potential and further accelerate US development. An EU-based Phase IIb AML trial is ongoing and Erytech plans to commence development in NHL. Graspas/Eryasp could also have use in solid tumours and a fully recruited Phase II pancreatic cancer trial is ongoing. We are currently reviewing our forecasts.

**INDUSTRY OUTLOOK**

Erytech's red blood cell (RBC) encapsulation technology captures therapeutic proteins within RBCs. This process protects both the molecule from degradation, extending the half-life, and the patient from exposure, reducing severe reactions. The increased half-life allows smaller quantities of molecule to achieve similar efficacy, thereby improving safety.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	2.0	(8.7)	(9.0)	(150.66)	N/A	N/A
2015	2.9	(15.3)	(15.0)	(215.62)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €3.63  
 Market cap: €482m  
 Market: FRA

**Share price graph (€)**

**Company description**

Evotec is a drug discovery business that provides outsourcing solutions to pharmaceutical companies, including Bayer, Boehringer Ingelheim, Janssen and Roche. It has operations in Germany, France, the UK and the US.

**Price performance**

%	1m	3m	12m
Actual	(4.9)	13.2	1.8
Relative*	(2.3)	16.2	16.0

\* % Relative to local index

**Analyst**

Jonas Pecilius

## Evotec (EVT)

**INVESTMENT SUMMARY**

Evotec's business is in a strong position, with 43% total and 57% base revenue (excluding milestones, upfronts and licences) increases in 2015 and continuing growth in Q116. EVT Innovate and EVT Execute should remain the near- to mid-term drivers maintaining double-digit base revenue growth (>15% guided for 2016), underpinned by the acquisition of Sanofi's Toulouse facility, providing more capacity, capabilities and future revenues. Evotec has announced a spin-off, Topas Therapeutics, with a €14m series A funding round co-led by three VC companies and Evotec, which will remain the largest shareholder. Topas has a nanoparticle-based platform with potential to deliver multiple projects in autoimmune and inflammatory disorders. Recent new and broadened collaborations include a compound management agreement with Pierre Fabre, an extension of the drug discovery alliance with Genentech, a tissue fibrosis collaboration with Pfizer and a diabetes and immuno-oncology partnership with Sanofi (2015). We are updating our forecasts.

**INDUSTRY OUTLOOK**

Evotec is a healthcare company that provides high-quality drug discovery services to the pharmaceutical industry and has collaborations with academic institutions to create novel drug discovery programmes.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	89.5	7.7	(0.7)	(1.96)	N/A	N/A
2015	127.7	8.7	22.6	15.15	24.0	241.0
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €4.42  
Market cap: €69m  
Market: Euronext Paris

**Share price graph (€)**

**Company description**

Gentical is developing a therapeutic vaccine, GTL001, to treat early-stage HPV 16 and 18 infections. The Phase II trial missed the primary endpoint but more data is due in mid 2016. A multivalent therapeutic vaccine, GTL002 is in preclinical.

**Price performance**

%	1m	3m	12m
Actual	(10.7)	2.8	(45.1)
Relative*	(8.2)	8.6	(37.6)

\* % Relative to local index

**Analyst**

Juan Pedro Serrate

## Gentical (GTCL)

**INVESTMENT SUMMARY**

Gentical has announced an update to its Phase II results on the GTL001 vaccine to treat early-stage HPV 16 and 18 infections. The primary 12-month endpoint, focused on the overall population of women with cervical cellular abnormalities, was not achieved. However, separation of categories into Normal, ASCUS and LSIL stages indicates possible efficacy in early stage patient subgroups using a stratified statistical test. This indicates that GTL001 could be effective in 80% of women positive for HPV 16/18, the patient population that Gentical targets. The 18-month clearance data is expected by Q316. Cash was €18.8m in March 2016. Cash is now sufficient until 2018.

**INDUSTRY OUTLOOK**

The aim of the Phase II was to gain sufficient data to enable a partnering deal. Gentical is confident of finding a partner but may need 18-month (Q316) and possibly 24-month data (Q117) to close a deal. A US 20-patient safety Phase I for GTL001 has treated the first patient. GTL002 (a multivalent vaccine) could enter trials in 2017.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(10.9)	(10.8)	(78.1)	N/A	N/A
2015	0.2	(11.4)	(11.2)	(72.1)	N/A	N/A
2016e	0.0	(8.8)	(8.7)	(55.8)	N/A	N/A
2017e	0.0	(8.3)	(8.3)	(53.4)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 521.5p  
Market cap: £1371m  
Market: AIM, NASDAQ

**Share price graph (p)**

**Company description**

GW is a UK-based speciality pharma company developing cannabinoid medicines. Lead pipeline candidate Epidiolex is undergoing Phase III trials for childhood epilepsy. Sativex is marketed by partners in a number of EU countries for MS spasticity.

**Price performance**

%	1m	3m	12m
Actual	10.1	25.5	(19.5)
Relative*	12.8	29.1	(11.2)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## GW Pharmaceuticals (GWP)

**INVESTMENT SUMMARY**

GW Pharmaceuticals (GW) is developing an extensive cannabinoid portfolio with potential to treat a broad range of diseases. The lead pipeline asset is Epidiolex, now undergoing a multiple Phase III clinical study program for refractory childhood epilepsies. Initial top-line Phase III data from their trial in Dravet syndrome was statistically and clinically significant, with a 39% reduction in the number of convulsive seizures ( $p=0.01$ ). A second trial in Dravet is ongoing. A Phase III trial in Lennox-Gastaut syndrome is due in June and a second later on this year. They have also recently commenced a Phase III in Tuberous Sclerosis Complex (TSC).

**INDUSTRY OUTLOOK**

GW is the leading player in cannabinoid medicines. Cannabinoids are diverse chemical compounds that GW extracts from cannabis plant varieties (chemotypes) it has bred. Epidiolex has the potential to treat a broad range of treatment-refractory epilepsy conditions, while the portfolio extends to other orphan indications such as TSC epilepsy and NHIE.

Y/E Sep	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	30.0	(17.0)	(18.3)	(6.4)	N/A	N/A
2015	28.5	(54.6)	(55.8)	(17.6)	N/A	N/A
2016e	8.8	(94.4)	(95.2)	(29.9)	N/A	N/A
2017e	11.4	(84.0)	(85.0)	(25.6)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 1955.0p  
 Market cap: £1186m  
 Market: AIM, NASDAQ

**Share price graph (p)**

**Company description**

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

**Price performance**

%	1m	3m	12m
Actual	13.0	2.6	8.2
Relative*	15.8	5.5	19.2

\* % 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. We expect progress of the mid- to late-stage pipeline during 2016-17 (including US and China regulatory filings) to catapult the company into the international spotlight. The pipeline is progressing well, material clinical results are expected during the coming year with potential for savolitinib's US NDA submission under breakthrough therapy designation by year end. The company has successfully raised gross proceeds of approximately US\$110.16m via a secondary listing of ADRs on the NASDAQ exchange. PBT excludes the earnings contributions from JVs, which in 2015 reported at \$22.57m (as equity in investees, net of tax).

**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, HCM has the potential to become a global oncology and immunology player.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	87.3	(17.0)	(20.0)	(17.8)	N/A	178.4
2015	178.2	(7.8)	(10.5)	14.6	194.2	N/A
2016e	180.4	(43.3)	(48.1)	(0.5)	N/A	N/A
2017e	226.0	(20.5)	(26.7)	6.0	472.6	N/A

**Sector: Pharma & healthcare**

Price: €0.88  
 Market cap: €32m  
 Market: Alternext Paris

**Share price graph (€)**

**Company description**

Hybrigenics is a French biotech company. It provides protein-protein and small molecule analysis services and is conducting anti-cancer studies on lead drug inecalcitol, primarily in adult leukaemias.

**Price performance**

%	1m	3m	12m
Actual	3.5	0.0	(41.3)
Relative*	6.4	5.6	(33.3)

\* % Relative to local index

**Analyst**

Juan Pedro Serrate

## Hybrigenics (ALHYG)

**INVESTMENT SUMMARY**

Hybrigenics has adopted a development strategy with vitamin D3 derivative inecalcitol, first focusing on adult haematological cancers. In addition to chronic lymphocytic leukaemia (CLL) and chronic myeloid leukaemia (CML), Hybrigenics is prioritising acute myeloid leukaemia (AML) given inecalcitol's orphan status in the US and Europe and the scarcity of treatment options in this aggressive and difficult to treat leukaemia. A Phase II study is planned to start in France and the US in 2016. Interim Phase II data are expected in Q216 in CML. Inecalcitol is supported by strong anti-proliferative potency and excellent safety profile demonstrated in the 2014 CLL study. The investment case rests on inecalcitol's potential to enhance rather than replace approved therapies, particularly in view of the weakened general health of older leukaemia patients who are unable to tolerate therapies with harmful side effects. Our peak sales estimate is US\$769m across the three indications.

**INDUSTRY OUTLOOK**

Inecalcitol faces competition from existing drugs and those in development. However, a good safety profile could give it an advantage. Preclinical models show that it has additional potential in breast cancer. Hybrigenics has a cash-generative subsidiary in protein research and genomics services.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	6.8	(2.1)	(2.2)	(8.5)	N/A	N/A
2015	6.5	(3.6)	(3.6)	(10.6)	N/A	N/A
2016e	6.1	(6.0)	(5.9)	(16.6)	N/A	N/A
2017e	6.3	(6.4)	(6.5)	(18.1)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 435.1p  
 Market cap: £701m  
 Market: LSE

**Share price graph (p)**



**Company description**

Imperial Innovations is a technology transfer, incubation and venture investment company. It invests in ventures from Imperial College London, Cambridge and Oxford Universities and UCL. The majority of its investments are bio/med tech.

**Price performance**

%	1m	3m	12m
Actual	4.2	3.6	(6.1)
Relative*	6.8	6.6	3.5

\* % Relative to local index

**Analyst**

Lala Gregorek

## Imperial Innovations (IVO)

**INVESTMENT SUMMARY**

Imperial Innovations (IVO) has an estimated £239m available for investment in its portfolio of rapidly maturing and emerging companies; this follows a recent £100m (£97.0m net estimate) equity raise (23.5m new shares at 425p), added to £91.6m in cash as of 29 January and a £50m EIB loan facility. IVO has invested £27.5m in 17 companies in H116, including the addition of six new companies to the unquoted investment portfolio, compared to H115 investments of £22.2m in 13 companies. Notable recent funding rounds for IVO's portfolio companies include £19m for Kesios, £60m for Mission Therapeutics, £30m for Nexeon, £31.5m for Inivata and £6.2m for FeatureSpace. The increased number and size of these rounds should help to bring potential valuation inflection points and/or 'exits' (IPO/M&A) for a number of companies into view.

**INDUSTRY OUTLOOK**

The investment case rests on the real value of the portfolio and the success of investments in maturing companies. There is potential for significant value creation if 'exits' (IPOs/M&A/license deals) are achieved at valuations in excess of typically modest carrying values, which justifies IVO's current share price premium (net portfolio value of £355m as of 31 January 2016, vs £327m at 31 July 2015).

Y/E Jul	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	3.6	(8.4)	(8.3)	(8.1)	N/A	N/A
2015	5.1	(8.2)	(7.4)	(5.4)	N/A	N/A
2016e	5.1	(10.6)	(10.2)	(6.9)	N/A	N/A
2017e	5.2	(11.2)	(11.5)	(7.1)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.01  
 Market cap: A\$16m  
 Market: ASX

**Share price graph (A\$)**



**Company description**

Imugene is an immune oncology company developing HER-Vaxx, a proprietary HER2 +ve cancer vaccine. A Ph Ib dose study is planned in gastric cancer starting in mid-2016 with a direct Ph II follow-on study in 68 patients.

**Price performance**

%	1m	3m	12m
Actual	(10.0)	(10.0)	(18.2)
Relative*	(6.4)	(10.4)	(12.9)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Imugene (IMU)

**INVESTMENT SUMMARY**

Imugene has completed manufacture of its strongly immunogenic gastric (stomach) cancer therapeutic vaccine, HER-Vaxx, in preparation for a randomised Phase Ib/II trial in H216. HER-Vaxx could replicate or improve on the combination of two proven therapeutic antibodies, Herceptin and Perjeta (Roche), a combination that significantly improves survival in breast cancer and may do so in gastric cancer. In HER-Vaxx Phase I, management observes that patient antibodies displayed potent anti-tumour activity with an immune response. A new formulation of HER-Vaxx stimulated a 10-fold increase in antibody response in recent animal model testing. Imugene has entered a partnership to develop new mimotope-based immunotherapies against oncology targets, which could dramatically expand its product pipeline. Cash at 31 March was A\$2.4m.

**INDUSTRY OUTLOOK**

Global gastric cancer incidence is 934,000 cases with few current therapeutic options. Gastric cancer trials are faster to run than in breast cancer as median survival in metastatic gastric cancer is less than 12 months. An 18-patient Phase Ib dose-finding study is planned from H116, followed by a Phase II in 68 patients. HER2 is overexpressed in up to 20% of gastric cancers.

Y/E Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	0.6	(2.0)	(2.0)	(0.17)	N/A	N/A
2016e	0.8	(2.4)	(2.4)	(0.15)	N/A	N/A
2017e	0.8	(2.5)	(2.5)	(0.14)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$2.14  
 Market cap: US\$6m  
 Market: OTCQX

**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	(7.0)	(42.9)	(69.0)
Relative*	(8.0)	(43.8)	(68.5)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## International Stem Cell (ISCO)

**INVESTMENT SUMMARY**

International Stem Cell (ISCO) is an early-stage cell therapy company currently in Phase I/IIa clinical trials to treat Parkinson’s disease (PD) with preliminary data expected before the end of the year. 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. In addition, ISCO sells skincare and biomedical supplies to the market, generating \$8m in sales and \$1.7m in underlying operating profit in 2015.

**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 Jan	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	7.0	(9.1)	(8.7)	(971.0)	N/A	N/A
2015	7.6	(5.0)	(4.6)	(129.0)	N/A	N/A
2016e	8.2	(5.5)	(5.5)	(196.0)	N/A	N/A
2017e	9.0	(5.2)	(5.8)	(207.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €5.29  
 Market cap: €136m  
 Market: FRA

**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	17.4	0.8	(19.9)
Relative*	20.5	3.5	(8.7)

\* % Relative to local index

**Analyst**

Dr Susie Jana

## MagForce (MF6)

**INVESTMENT SUMMARY**

MagForce continues to drive forward its strategy to increase uptake of its NanoTherm therapy for cancer. NanoTherm is approved in Europe for brain cancer and commercial patients are being treated in Germany. Six NanoActivators are currently installed in Germany. In the US, an IDE for prostate cancer is filed and management is working with FDA to advance the IDE approval. The first clinical treatment site is operational (other sites are in development) and will be used in the short-term to provide the required pre-clinical study data. Note: Our financial forecasts have not been updated post publication of FY14 and H115 results.

**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)
2013	0.0	(6.6)	(6.7)	(33.7)	N/A	N/A
2014	0.0	(8.0)	(7.9)	(32.8)	N/A	N/A
2015e	N/A	N/A	N/A	N/A	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A



**Sector: Pharma & healthcare**

Price: €6.43  
 Market cap: €127m  
 Market: FRA

**Share price graph (€)**



**Company description**

Medigene is a German biotech company with a core business in cancer immunotherapy. Dendritic cell (DC) vaccines are in Phase I/II clinical studies, while a T-cell receptor (TCR) candidate should enter the clinic in 2016.

**Price performance**

%	1m	3m	12m
Actual	(22.5)	(15.8)	(18.6)
Relative*	(20.4)	(13.5)	(7.2)

\* % Relative to local index

**Analyst**

Linda Pomeroy

# 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). Phase I/II studies are underway with DC vaccines for prostate cancer and acute myeloid leukaemia (investigator-sponsored) and acute myeloid leukaemia (Medigene). For TCRs, Medigene plans to start up to three clinical trials; the first in Q416/Q117 (investigator-led) and others in 2017 and 2018. Investment will also be made in the process development of TCRs according to GMP, and preclinical work on TABs. Recent non-core business deals have proved beneficial for Medigene (transference of EndoTAG(R) to SynCore, sale of its spin-off Catherex to Amgen and 50% sale of its stake in Immunocore), which further strengthens its immune-oncology focus. Medigene held €46.3m in cash at Q116, following a €46m equity issue (5.6m shares at €8.30) in July 2015.

**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)
2014	13.8	(2.0)	(5.3)	(42.29)	N/A	N/A
2015	6.8	(9.4)	(12.8)	(73.55)	N/A	N/A
2016e	7.1	(11.1)	(13.1)	(65.98)	N/A	N/A
2017e	7.3	(12.1)	(13.5)	(66.77)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$1.06  
 Market cap: A\$404m  
 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	(44.6)	(62.1)	(73.4)
Relative*	(42.4)	(62.3)	(71.6)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

# Mesoblast (MSB)

**INVESTMENT SUMMARY**

Mesoblast announced impressive early results from the first cohort of its Phase II trial of MPC therapy in RA patients refractory to biologics. The data are comparable to response rates seen with TNF alpha-biologics in first-line therapy and better than approved JAK inhibitor Xeljanz in comparable biologic refractory patients. JCR-031 was launched in Japan for acute graft versus host disease (GvHD) in February, following approval in September 2015. Clinical data from two phase III studies of MPC-150-IM in heart failure will support regulatory approval; the first trial cleared an interim safety analysis in Q216. Mesoblast has regained full rights to the cardiovascular program from Teva and at the appropriate time will seek to partner with a pharma company with a cardiovascular focus. Teva and Mesoblast continue to collaborate in the central nervous system and bone marrow transplant fields. Mesoblast had cash of US\$100M on 31 March. It has been offered an equity finance facility to fund the ongoing CHF Phase III trial program. Our forecasts are under review.

**INDUSTRY OUTLOOK**

Mesoblast is the leading mesenchymal stem cell development company, with two platforms (MPCs, MSCs) and nine clinical candidates in Phase II and III. Alliances with JCR, Lonza and Teva underpin the key programmes.

Y/E Jun	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	25.1	(83.9)	(75.5)	(23.64)	N/A	N/A
2015	32.4	(99.0)	(94.9)	(29.59)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: 131.5p  
Market cap: £44m  
Market: LSE

**Share price graph (p)**

**Company description**

Midatech Pharma is an ambitious speciality pharmaceutical company, founded in 2000. The patented gold nanoparticle technology platform is developing therapeutics for several diseases such as diabetes and various cancers.

**Price performance**

%	1m	3m	12m
Actual	(22.7)	(16.0)	(54.7)
Relative*	(20.8)	(13.6)	(50.0)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Midatech Pharma (MTPH)

**INVESTMENT SUMMARY**

Midatech is a clinical-stage speciality pharma company with two key platform. The first is a drug conjugate delivery system based on gold nanoparticles. The second is a sustained release Q chip technology; proprietary microspheres can be tailored to deliver a precise release profile for numerous drugs. An agreement is in place with Ophthotech to explore the use of the technology for sustained delivery formulations. It has also recently announced the dosing of a second patient for MTX110 in Diffuse Intrinsic Pontine Glioma, a very rare pediatric cancer. Our forecasts are under review.

**INDUSTRY OUTLOOK**

The proprietary platforms develop products that address debilitating conditions with significant clinical needs. Applications that target larger market sizes are expected to be out-licensed for development and niche indications likely developed/marketed in-house.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	0.2	(9.9)	(10.1)	(100.6)	N/A	N/A
2015	1.4	(12.7)	(11.0)	(34.9)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €2.71  
Market cap: €61m  
Market: FRA

**Share price graph (€)**

**Company description**

Mologen is a German biotech company developing cancer immunotherapies. The lead products are MGN1703 for metastatic colorectal cancer maintenance and SCLC; and MGN1601, an allogeneic renal cancer cell vaccine.

**Price performance**

%	1m	3m	12m
Actual	(23.2)	(29.5)	(48.1)
Relative*	(21.2)	(27.6)	(40.8)

\* % Relative to local index

**Analyst**

Dr Susie Jana

## Mologen (MGN)

**INVESTMENT SUMMARY**

Mologen is developing novel immunotherapies for use in the post-chemo maintenance setting in cancer and for the treatment of infectious diseases. Recent completion of the strategic review focuses Mologen's efforts on Lefitolimod, which is in four clinical trials. IMPALA is a 540-pt pivotal study in metastatic colorectal cancer (mCRC) maintenance; full enrollment is expected by end-2016. Recruitment has completed for the 100-patient Phase II trial (IMPULSE) in small-cell lung cancer (SCLC) and analysis is expected to start at end-2016/early-2017. The Phase I TEACH study to treat HIV (the first non-cancer study for MGN1703) has had its dosing regimen extended to six months; final results now expected H117. A 60-patient Phase I combination study of MGN1703 with Yervoy in solid tumours is now being conducted by MD Anderson. Cash of €20.1m as of 31st March 2016 should be sufficient to complete recruitment of IMPALA and could reach top-line data from IMPULSE.

**INDUSTRY OUTLOOK**

IMPALA is scheduled to produce headline data by end-2017/early-2018. Final overall survival (OS) data from IMPACT (Phase II in mCRC), and initial OS data from IMPULSE (expected H117) may offer fresh financing/partnering opportunities for MGN1703 before then.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(17.0)	(17.0)	(1.01)	N/A	N/A
2015	0.0	(20.4)	(20.5)	(0.98)	N/A	N/A
2016e	0.0	(24.9)	(24.9)	(1.20)	N/A	N/A
2017e	0.1	(25.7)	(25.8)	(1.24)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €38.39  
 Market cap: €1019m  
 Market: FRA

**Share price graph (€)**

**Company description**

MorphoSys is a German biotechnology company that uses its proprietary antibody platforms to produce human antibodies for therapeutic use across a range of indications for partners and to develop its own pipeline.

**Price performance**

%	1m	3m	12m
Actual	(13.6)	(6.9)	(41.7)
Relative*	(11.3)	(4.4)	(33.5)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## MorphoSys (MOR)

**INVESTMENT SUMMARY**

MorphoSys has a broad portfolio with 104 total programmes, 14 of those proprietary, including programmes for MOR208, MOR202 and MOR209. MOR208 is an Fc-enhanced antibody targeting CD19, which is being developed for DLBCL and CLL, while MOR202 is an anti-CD38 antibody in Phase I/IIa for multiple myeloma. MOR209, an anti-PSMA/CD3 antibody, is in Phase I trials for prostate cancer. Among the partnered programmes, J&J has now initiated five six Phase III studies with guselkumab in psoriasis, a programme with blockbuster potential. Bimagrumab, partnered with Novartis, recently failed a Phase IIb/III trial in myositis, although other trials, including two additional phase 3 trials in myositis, continue.

**INDUSTRY OUTLOOK**

The pharmaceutical industry is out-licensing more drug discovery and developing more biological products, both trends that should benefit MorphoSys. Also, there is increasing demand for novel therapies, such as those in MorphoSys's proprietary pipeline.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	64.0	(1.8)	(1.6)	(1.3)	N/A	N/A
2015	106.2	21.4	22.1	62.8	61.1	N/A
2016e	48.6	(59.5)	(58.6)	(153.4)	N/A	N/A
2017e	56.0	(67.4)	(66.5)	(172.1)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €15.80  
 Market cap: €247m  
 Market: Euronext Paris

**Share price graph (€)**

**Company description**

Nanobiotix is a French nanomedicine company developing radiotherapy enhancers for the treatment of cancer. Lead product NBTXR3 is in pivotal clinical development in STS in Europe and is partnered with PharmaEngine in Asia-Pacific.

**Price performance**

%	1m	3m	12m
Actual	(11.5)	(4.9)	(14.1)
Relative*	(9.0)	0.5	(2.4)

\* % Relative to local index

**Analyst**

Jonas Peciulis

## Nanobiotix (NANO)

**INVESTMENT SUMMARY**

Currently NBTXR3 is being investigated for a total of six indications including STS (Europe/Asia; Phase II/III; in partnership with PharmaEngine), liver cancers (Europe; HCC and metastases; Phase I/II), head and neck cancers (Europe; Phase I/II) and rectal cancer (pilot, run by PharmaEngine in Asia). On 5 January, the company announced plans to expand preclinical research into immuno-oncology with the first pre-clinical data released in May showing a promising proof-of-concept. On 30 December, the FDA approved the IND for NBTXR3 to enter clinical trials for prostate cancer, which will be Nanobiotix's first study in the US. 2016 will provide a number of triggers, the main ones being Phase I/III H&N cancer trial results, pivotal STS trial data, results from two Phase I/II studies for liver cancers and a milestone event – the CE-mark approval in Europe, potentially end 2016. Nanobiotix boosted its cash position with gross proceeds of €21.3m on 11 March.

**INDUSTRY OUTLOOK**

Radiotherapy is a cornerstone cancer treatment used in around 60% of all cancer patients. NanoXray aims to improve the benefits of current radiotherapy without increasing the risks to surrounding healthy tissue. The purely physical mechanism of action is supported by clinical data that have demonstrated encouraging efficacy with no serious adverse events.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	2.8	(9.3)	(9.5)	(74.14)	N/A	N/A
2015	4.0	(16.7)	(17.0)	(120.18)	N/A	N/A
2016e	7.1	(26.8)	(27.6)	(185.00)	N/A	N/A
2017e	8.4	(53.0)	(55.0)	(349.00)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €0.88  
 Market cap: €37m  
 Market: Alternext Paris

**Share price graph (€)**



**Company description**

Neovacs is a French biotech company focused on the development of active immunotherapies for the treatment of lupus and dermatomyositis. A Phase II programme with IFN-alpha-Kinoid in lupus is underway.

**Price performance**

%	1m	3m	12m
Actual	(20.5)	(16.8)	(25.1)
Relative*	(18.2)	(12.1)	(14.8)

\* % Relative to local index

**Analyst**

Dr John Savin

## Neovacs (ALNEV)

**INVESTMENT SUMMARY**

Neovacs's lead project, IFN-alpha-Kinoid, is in a Phase IIb in lupus (SLE) with data due in H117. A partnering deal with CKD Pharmaceutical could allow a 2018 launch in Korea. The deal is worth €5m of which €1m was upfront in FY15. Positive Phase II data will start the development of a manufacturing joint venture (Neostell) with Stellar Biotechnologies. This has €5m grant funding agreed. Dec 2015 cash was €6.1m before the CKD payment. Neovacs has €5m of grants and repayable advances to be paid over four years. We are revising our FY17 estimates.

**INDUSTRY OUTLOOK**

Neovacs has a 178-patient EU, US, and RoW Phase IIb in SLE underway. Nine-month efficacy data is due in H117; the Phase II includes a 12 patient US arm after FDA agreement. The Phase II is scheduled to report by Q317. There is a programme in dermatomyositis (DM), an orphan skin and muscular condition. Neovacs plans to evaluate INF Kinoid in Type 1 diabetes. A VEGF inhibitor is in preclinical for cancer and macular degeneration.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.2	(9.6)	(9.8)	(34.7)	N/A	N/A
2015	1.2	(11.3)	(11.4)	(17.0)	N/A	N/A
2016e	2.0	(12.0)	(12.1)	(27.3)	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: 80.5p  
 Market cap: £41m  
 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 health (Wanda, Glucosense), diagnostics (Vortex, ProAxis, Glycotest) and therapeutics (PDS Biotech).

**Price performance**

%	1m	3m	12m
Actual	0.6	(7.5)	(55.7)
Relative*	3.1	(4.8)	(51.1)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## NetScientific (NSCI)

**INVESTMENT SUMMARY**

NetScientific has a focused portfolio of potentially disruptive biomedical and healthcare technology investments. 2015 saw significant strategic changes, including senior management restructuring, bringing a new highly experienced CEO on board, rationalisation of the portfolio and new funding. The current focus is on digital health, diagnostics and therapeutics with the portfolio consisting of five core investments in which it has controlling stakes (Vortex, Wanda, ProAxis, Glycotest and Glucosense) 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.

**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)
2014	0.0	(5.5)	(5.5)	(13.4)	N/A	N/A
2015	0.1	(10.1)	(10.2)	(21.8)	N/A	N/A
2016e	0.7	(14.5)	(14.6)	(25.0)	N/A	N/A
2017e	3.4	(13.6)	(13.7)	(22.9)	N/A	N/A

**Sector: Pharma & healthcare**

Price: CHF13.90  
 Market cap: CHF201m  
 Market: Swiss Stock Exchange

**Share price graph (CHF)**

**Company description**

Newron is a CNS-focused biotech. Safinamide/Xadago (partnered with Zambon, US WorldMeds, Meiji Seika) for PD has been launched in Europe. The Sarizotan (Rett syndrome) pivotal trial STARS (Sarizotan Treatment of Apneas in Rett Syndrome) is expected to start Q3 2016

**Price performance**

%	1m	3m	12m
Actual	(20.8)	(31.2)	(47.9)
Relative*	(18.8)	(29.9)	(39.9)

\* % Relative to local index

**Analyst**

Juan Pedro Serrate

## Newron Pharmaceuticals (NWRN)

**INVESTMENT SUMMARY**

Newron's lead product, Xadago (safinamide) for Parkinson's disease (PD) has been launched in the UK, Germany, Italy, Switzerland, Spain, Belgium, Denmark and Sweden and is now generating sales through commercial partner Zambon (ex-Japan/Asia). In the US, Xadago's future is on hold, following a complete response letter from FDA. The company is in discussion with FDA to decide on the next steps. Other pipeline assets include sarizotan for Rett syndrome, the IND has been approved in the US and pivotal trial STARS (placebo-controlled Phase II/III trial) to investigate breathing disorders associated with RS is due to start Q316. A Phase II study of NW-3509 for schizophrenia as an add-on to antipsychotics has also started; this could be a candidate for out-licensing. As such, we place our financial forecasts and valuation under review until we receive clarity on the potential impact on Xadago US regulatory approval and market launch.

**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)
2014	1.6	(9.1)	(8.6)	(62.72)	N/A	N/A
2015	2.4	(17.6)	(18.3)	(117.21)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €0.71  
 Market cap: €6m  
 Market: NASDAQ OMX First North

**Share price graph (€)**

**Company description**

Nexstim sells a non-invasive brain stimulation technology (nTMS) used as a diagnostic device for brain surgery planning (NBS System). The therapy system (NBT) failed in Phase III for stroke but an FDA submission is planned

**Price performance**

%	1m	3m	12m
Actual	(32.4)	(47.4)	(88.0)
Relative*	(32.9)	(44.5)	(87.1)

\* % Relative to local index

**Analyst**

Dr John Savin

## Nexstim (NXTMH)

**INVESTMENT SUMMARY**

Analysis of the partly unblinded Phase III data, stopped due to a futility analysis, shows that two-thirds of treated patients achieved the primary endpoint, but also that the 'active' sham treated patients showed a similar response. Nexstim will now unblind the study, giving 138+ patients worth of data in Q2. The company aims to file an FDA de novo 510(k) application in Q216, which might give some US sales from mid-2017 if the FDA agrees. The system can already be sold in the EU. Extra trials for economic validation and reimbursement are likely to be needed and indications such as depression could be developed. The CEO has left the company and the Chairman has assumed an interim CEO role. Nexstim has cash to last until Q316.

**INDUSTRY OUTLOOK**

Nexstim has developed a technology platform for diagnosis (NBS) and treatment (NBT) of vital motor and speech cortices in the brain. The FDA have approved three rTMS products for depression, other indications like pain and tinnitus are possible.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	2.2	(7.4)	(10.2)	(143.0)	N/A	N/A
2015	2.5	(10.0)	(9.6)	(622.0)	N/A	N/A
2016e	3.1	(8.7)	(8.9)	(812.0)	N/A	N/A
2017e	4.2	(6.9)	(7.1)	(549.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.10  
 Market cap: A\$45m  
 Market: ASX

**Share price graph (A\$)**

**Company description**

Novogen's two main drug technology platforms are super-benzopyrans and anti-tropomyosins. SBP compounds show potent activity against cancer stem cells with potential application in degenerative diseases; ATMS show synergy with anti-mitotics in cancer.

**Price performance**

%	1m	3m	12m
Actual	(4.5)	(4.5)	(58.0)
Relative*	(0.7)	(4.9)	(55.3)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Novogen (NRT)

**INVESTMENT SUMMARY**

Novogen is developing two groups of anti-cancer compounds that have shown promise in preclinical studies. Its super-benzopyran drugs, which include Cantrixil and Trilexium, are potent against cancer stem cells that are resistant to standard chemotherapy drugs, both in vitro and in animal models. Its lead anti-tropomyosin drug, Anisina, shows strong synergy with standard-of-care anti-mitotic vinca alkaloid drugs. Anisina has been granted orphan drug designation for neuroblastoma by the US FDA. The company is well-funded with A\$37.6m cash at 31 December 2015 and is on track to have Cantrixil in clinical trials in Q416 and Anisina in the clinic in 2017. Novogen has strengthened its management team with the appointment of Dr James Garner (ex Sanofi) as CEO and John O'Connor as Chairman.

**INDUSTRY OUTLOOK**

Novogen is a biotechnology company listed on the ASX and NASDAQ. Its two main drug technology platforms are super-benzopyrans (SBP) and anti-tropomyosins (ATM). SBP compounds show potent activity against cancer stem cells and also have potential application in degenerative diseases.

Y/E Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.3	(5.8)	(7.6)	(4.76)	N/A	N/A
2015	1.6	(7.6)	(8.4)	(2.99)	N/A	N/A
2016e	2.8	(13.7)	(12.6)	(2.95)	N/A	N/A
2017e	4.9	(13.9)	(13.1)	(3.05)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €2.61  
 Market cap: €108m  
 Market: Euronext Paris

**Share price graph (€)**

**Company description**

Onxeo is focused on orphan cancer and has three late-stage oncology assets it could commercialise in Europe (Livatag, Beleodaq and Validive). Royalty-earning Beleodaq is launched in the US, along with two non-core, specialty products. Acquisition of DNA Therapeutics adds a Phase I stage asset in DNA repair field to Onxeo's pipeline.

**Price performance**

%	1m	3m	12m
Actual	(18.4)	(16.1)	(47.5)
Relative*	(16.2)	(11.3)	(40.3)

\* % Relative to local index

**Analyst**

Jonas Peculis

## Onxeo (ONXEO)

**INVESTMENT SUMMARY**

Onxeo recently announced the acquisition of DNA Therapeutics, a private biotech company developing signal-interfering DNA repair technology. The lead clinical stage compound, AsiDNA (formerly DT01), will diversify Onxeo's R&D pipeline. Discussions with regulatory authorities led to a conclusion that two Phase III studies will be required for Validive in oral mucositis (in H&N cancer). Onxeo will now focus on partnering this programme. A second lead product, Livatag, is in Phase III. ReLive and liver cancer data are expected in mid-2017. The 400-patient trial, which began in 2012, is >65% enrolled. Onxeo's third lead asset, Beleodaq, is already launched in the US with partner Spectrum for relapsed/refractory peripheral T-cell lymphoma (r/r PTCL), generating royalty income for Onxeo. The start of the Phase III Beleodaq trial in frontline PTCL is expected in 2016, supported by the recent Phase I data presented at ASH.

**INDUSTRY OUTLOOK**

The patent expiry of blockbuster drugs and increased competition from generics has shifted the focus of the pharmaceutical industry to orphan drugs. Government incentives for drug development, as well as support from the regulatory bodies provide incentives for orphan drug developers.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	22.1	(4.5)	0.2	(5.03)	N/A	N/A
2015	3.5	(20.4)	(20.0)	(43.52)	N/A	N/A
2016e	5.3	(19.7)	(19.6)	(47.82)	N/A	N/A
2017e	11.3	(18.8)	(19.0)	(45.85)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$3.43  
 Market cap: US\$24m  
 Market: NASDAQ

**Share price graph (US\$)**



**Company description**

Opexa is developing personalized T-cell immunotherapy to treat multiple sclerosis (MS) and other autoimmune diseases such as neuromyelitis optica (NMO). Lead candidate Tcelna is in Phase IIb studies for secondary progressive MS (SPMS), with data expected in Q416.

**Price performance**

%	1m	3m	12m
Actual	61.8	64.9	(17.5)
Relative*	59.9	62.5	(16.4)

\* % Relative to local index

**Analyst**

Pooya Hemami

## Opexa Therapeutics (OPXA)

**INVESTMENT SUMMARY**

Opexa's Tcelna is advancing in Phase IIb studies in secondary progressive MS (SPMS), with data expected in early Q416. Tcelna is a patient-specific (autologous) immunotherapy that aims to suppress myelin-reactive T-cells (MRTCs), and thereby curb autoimmune responses against myelin. Following the collection of a patient's own blood, the T-cells are screened against predefined self-reacting myelin protein targets. The dominant MRTC lines are isolated and expanded. An attenuated end-product is re-injected into the patient, aiming to generate a feedback response that will suppress the undesired circulating MRTCs.

**INDUSTRY OUTLOOK**

The firm is fully funded into Q117, and thus through the forecast attainment of Phase II data which, if positive, could sharply increase investor and stakeholder interest. Merck KGaA has an option to in-license Tcelna in MS. Opexa is also developing OPX-212 in neuromyelitis optica (NMO), a rare autoimmune disorder leading to vision loss and paralysis. Opexa is working to resolve the manufacturing challenges that recently affected OPX-212 development.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	1.3	(14.7)	(15.1)	(432.89)	N/A	N/A
2015	2.6	(11.7)	(12.1)	(206.46)	N/A	N/A
2016e	26.6	14.4	14.2	202.83	1.7	1.9
2017e	0.0	(14.3)	(14.3)	(190.11)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$0.47  
 Market cap: US\$68m  
 Market: NASDAQ OTCQX

**Share price graph (US\$)**



**Company description**

Orexigen is a biopharmaceutical company focusing on obesity treatments. It will sell its sole product, Contrave, through its own salesforce in the US after taking back the rights from partner, Takeda. Contrave was launched in the US in Oct 2014 and approved in the EU in March 2015 under the trade name Mysimba.

**Price performance**

%	1m	3m	12m
Actual	23.1	(14.7)	(89.9)
Relative*	21.7	(15.9)	(89.7)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Orexigen Therapeutics (OREX)

**INVESTMENT SUMMARY**

Orexigen's obesity drug, Contrave, is an extended-release oral combination of long-marketed bupropion (Wellbutrin for depression) and Naltrexone (Revia for addiction). Now the leading branded obesity treatment in the US, Orexigen announced the acquisition of US rights to Contrave in the US from partner Takeda in mid-March. The company now plans to market Contrave in the US with a new dedicated salesforce of 160 reps. Contrave is approved under the brand Mysimba in the EU. The company recently announced a collaborative agreement with Valeant in 18 Central and Eastern European countries, including 12 in the EU where we can expect first launch by year end. Orexigen has also signed a commercialisation agreement with Kwang Dong in South Korea and we anticipate first sales by year end on the back of the recent Korean Ministry of Food and Drug safety approval.

**INDUSTRY OUTLOOK**

Orexigen is a biopharmaceutical company focusing on obesity treatments. Contrave was launched in the US in October 2014 and approved in the EU in March 2015, under the trade name Mysimba.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	55.5	(30.7)	(37.5)	(31.74)	N/A	2.1
2015	24.5	(60.3)	(67.3)	(52.38)	N/A	N/A
2016e	46.4	(57.5)	(59.5)	(40.09)	N/A	N/A
2017e	120.9	(19.1)	(32.6)	(21.51)	N/A	N/A

**Sector: Pharma & healthcare**

Price: SEK44.00  
 Market cap: SEK1516m  
 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.

**Price performance**

%	1m	3m	12m
Actual	(6.0)	(21.8)	(44.1)
Relative*	(3.0)	(17.7)	(38.0)

\* % Relative to local index

**Analyst**

Lala Gregorek

## Orexo (ORX)

**INVESTMENT SUMMARY**

Orexo has successfully navigated a challenging Q116, emerging with positive operating cash flow due to working capital and a focus on cost control. Zubsolv sales recovered a positive trajectory post-January due to a 5% price rise effective February, increased market share with United Health Group and Express Scripts, an improved gross:net and increased sales on a mg per Rx basis. Orexo is maintaining a flexible cost base, targeting its sales effort based on the market access position. Near-term priorities are Zubsolv revenue growth, balanced with appropriate sales investment to target profitability. Investment will increase as Zubsolv's market access and reimbursement position improves and federal legislation is passed, significantly expanding the available market. Global expansion with a potential new ex-US partner for Zubsolv represents further upside; a deal is targeted for Q216, with European filing planned in H216. Q216 results report on July 12.

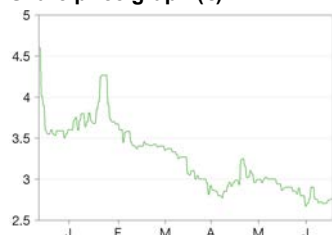
**INDUSTRY OUTLOOK**

The US buprenorphine/naloxone market is worth >\$2bn. 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)
2014	570.3	(12.5)	(52.6)	(164.8)	N/A	N/A
2015	643.2	(88.4)	(191.2)	(572.9)	N/A	N/A
2016e	673.7	(41.2)	(71.6)	(195.8)	N/A	6.5
2017e	927.1	97.6	76.6	155.3	28.3	21.2

**Sector: Pharma & healthcare**

Price: €2.76  
 Market cap: €79m  
 Market: Madrid Stock Exchange

**Share price graph (€)**

**Company description**

Oryzon is a Spanish biotechnology company focused on developing novel epigenetic compounds. Lead compound ORY-1001 is partnered with Roche and is undergoing a Phase I/IIa study for acute leukaemia. ORY-2001 has potential for Alzheimer's disease and has been approved to enter Phase I.

**Price performance**

%	1m	3m	12m
Actual	(4.6)	(9.6)	N/A
Relative*	(0.7)	(2.9)	N/A

\* % Relative to local index

**Analyst**

Jonas Peculis

## Oryzon Genomics (ORY)

**INVESTMENT SUMMARY**

Oryzon's core expertise lies in developing small molecule inhibitors for epigenetic targets. The lead product ORY-1001 is a first-in-class inhibitor of lysine specific demethylase 1 (LSD1) and currently is in Phase I/IIa for acute leukaemia, with the results potentially out by end 2016. Preclinical models showed that LSD1 is a key effector causing arrest in cell differentiation in subtypes of acute myeloid leukaemia (AML) and that the inhibition of this target could potentially lead to an effective treatment. ORY-1001 is partnered with Roche, which can take over further development after the end of the ongoing Phase I/IIa. Oryzon's second product, ORY-2001, targets Alzheimer's disease (AD) and has entered a Phase I trial in early 2016. ORY-2001 has a dual activity, inhibiting LSD1 and monoamine oxidase B (MAO B), with preclinical data indicating a potential disease-modifying effect.

**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)
2014	15.5	11.7	11.3	48.3	5.7	5.3
2015	7.2	0.7	(0.1)	(0.6)	N/A	62.8
2016e	3.0	(3.1)	(3.6)	(11.4)	N/A	N/A
2017e	2.2	(4.1)	(4.7)	(16.6)	N/A	N/A



**Sector: Pharma & healthcare**

Price: 4.5p  
 Market cap: £122m  
 Market: LSE

**Share price graph (p)**



**Company description**

Oxford BioMedica is a leader in gene and cell therapy. The lentivector technology is wide ranging, covering in vivo and ex vivo vector products. The technology underpins the proprietary clinical development pipeline in addition to third party manufacturing contracts which add validation to the platform.

**Price performance**

%	1m	3m	12m
Actual	(20.9)	(31.8)	(43.0)
Relative*	(19.0)	(29.9)	(37.2)

\* % Relative to local index

**Analyst**

Dr Susie Jana

## Oxford BioMedica (OXB)

**INVESTMENT SUMMARY**

Oxford BioMedica's near-term outlook has been transformed by its specialist production capabilities. However the next 12-24 months will see increasing pipeline driven news flow as Phase I/II studies for OXB-102 (Parkinson's disease), OXB-202 (corneal graft rejection) and OXB-302 (CAR-T 5T4) for solid cancers could start by end 2016/early 2017 respectively. The expansion of the manufacturing capacity for 3rd parties (e.g Novartis's CTL019/CART-019) is nearly complete; with Novartis indicating a 2017 filing for CTL019, Oxford should start earning royalties and substantial manufacturing fees (up to \$76m over three years). This growing manufacturing revenue stream provides technology know-how validation and, more importantly, cash to fund R&D of the proprietary pipeline. In the longer term, additional collaborations for the late-stage projects, licence income from the patent estate and pipeline progress can be expected. Our forecasts are currently under review.

**INDUSTRY OUTLOOK**

Cell- and gene-therapy is the focus of much industry attention as it can dramatically alter the outcomes of many diseases. The proprietary lentivector platform is a flexible and efficient system that is promising in many indications.

Y/E Dec	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	13.6	(9.5)	(10.4)	(0.41)	N/A	N/A
2015	15.9	(12.5)	(16.6)	(0.49)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: NZ\$0.56  
 Market cap: NZ\$211m  
 Market: NZSX

**Share price graph (NZ\$)**



**Company description**

Pacific Edge develops and sells molecular diagnostic tests based on biomarkers for the early detection and management of cancer. Cxbladder Detect is sold in NZ, Australia and the US; complementary product Cxbladder Triage was launched in NZ in Dec (US launch planned mid-2015).

**Price performance**

%	1m	3m	12m
Actual	(11.1)	0.0	(9.7)
Relative*	(9.0)	(3.0)	(20.4)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Pacific Edge (PEB)

**INVESTMENT SUMMARY**

Pacific Edge's lead product, Cxbladder Detect, is a molecular diagnostic for the early detection and management of bladder cancer in patients with haematuria. Launched in the US, New Zealand and Australia, we expect news related to the success of numerous User Programmes over the next 12 months. Kaiser Permanente Southern California is recruiting c 2,000 patients in a large User Programme, evaluating follow-on diagnostic test Cxbladder Triage. In late February, the company announced the signing of a Federal Supply Schedule to the Veterans Administration, allowing the marketing of Cxbladder tests within the organization - the largest integrated healthcare system in the US.

**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)
2014	0.5	(9.3)	(9.8)	(3.4)	N/A	N/A
2015	3.7	(10.5)	(11.1)	(3.5)	N/A	N/A
2016e	8.5	(14.4)	(15.1)	(4.1)	N/A	N/A
2017e	28.2	2.0	1.7	0.4	140.0	206.1

**Sector: Pharma & healthcare**

Price: €1.78  
 Market cap: €90m  
 Market: FRA

**Share price graph (€)**



**Company description**

Paion is an emerging specialty pharma company developing anaesthesia products. Its lead product, remimazolam, is partnered with Yichang in China, Hana Pharma in S Korea, Pendopharm in Canada and R-Pharm in CIS, Turkey and MENA.

**Price performance**

%	1m	3m	12m
Actual	(9.8)	(23.1)	(23.8)
Relative*	(7.3)	(21.0)	(13.2)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Paion (PA8)

**INVESTMENT SUMMARY**

Paion reported positive top-line results from the first of two US pivotal studies of short-acting anaesthetic remimazolam in procedural sedation; 91% of patients in the remimazolam arm achieved the primary outcome and 5% on placebo. The safety profile was consistent with that observed in previous studies. Paion is allocating additional resources to complete recruitment in the second Phase III, in bronchoscopy patients. Planned changes in the US reimbursement of day procedures favouring less supervision by anaesthetists could incentivise gastroenterologists to use remimazolam. A European Phase III in cardiac surgery has been discontinued, with a new trial in general surgery contingent on funding. The PMDA stated that the non-clinical and clinical data packages for remimazolam for general anaesthesia were ready for filing. We expect an approval filing in Japan in H217. Cash of €26m at 31 March is sufficient to fund the US Phase III studies of remimazolam.

**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 oversedation.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	3.5	(11.5)	(11.6)	(22.9)	N/A	N/A
2015	0.1	(34.1)	(34.0)	(55.7)	N/A	N/A
2016e	0.1	(30.6)	(30.6)	(51.9)	N/A	N/A
2017e	0.1	(10.5)	(10.5)	(18.8)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$3.09  
 Market cap: US\$510m  
 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	(2.2)	3.7	(51.7)
Relative*	(3.3)	2.2	(51.0)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## PDL BioPharma (PDLI)

**INVESTMENT SUMMARY**

PDL BioPharma is reinventing itself as a healthcare-focused finance company through a three-pronged strategy: investing in royalty streams, providing high-yield financing to life science companies with near-term product launches as well as through the purchase of approved drugs to be sold by Noden Pharma (of which they own >88%) on a high margin basis. This strategy allows investors to gain exposure in healthcare through a relatively low-risk, diversified vehicle. Weakness in debt and equity markets has led to more opportunities to invest for the company than ever.

**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)
2014	581.2	546.3	501.3	203.66	1.5	1.7
2015	590.4	550.4	530.1	203.69	1.5	1.7
2016e	154.5	115.6	97.5	37.46	8.2	5.7
2017e	69.4	27.3	9.3	3.60	85.8	N/A

**Sector: Pharma & healthcare**

Price: €2.10  
 Market cap: €467m  
 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	(12.7)	(8.7)	(43.5)
Relative*	(9.2)	(2.0)	(27.0)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## PharmaMar (PHM)

**INVESTMENT SUMMARY**

PharmaMar restructured in late 2015 to concentrate on its potentially high-growth marine oncology activities. In the restructure, the oncology division, PharmaMar, absorbed the former parent company, Zeltia. PharmaMar has built a pipeline of first-in-class cancer drugs for development with strategic partners. Royalty income flowing from the recent approvals for Yondelis for soft tissue sarcoma in Japan and the US in September and October, respectively, should drive strong profit growth from 2017. The 420-patient Phase III trial of PM1183 in platinum-resistant ovarian cancer was cleared to continue in February after an interim safety analysis on the first 80 patients. The Phase III trial of Aplidin in multiple myeloma reported positive results in March, while a pivotal study of Aplidin in angioimmunoblastic T-cell lymphoma was initiated in June. Its Sylentis division reported positive results from a Phase II trial of SYL1001 in dry eye syndrome.

**INDUSTRY OUTLOOK**

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

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	149.7	25.7	16.3	6.8	30.9	19.9
2015	162.0	19.3	6.5	3.2	65.6	45.8
2016e	177.1	5.9	(5.9)	(3.4)	N/A	N/A
2017e	195.6	35.2	23.6	9.9	21.2	15.0

**Sector: Pharma & healthcare**

Price: NOK40.60  
 Market cap: NOK873m  
 Market: Oslo

**Share price graph (NOK)**

**Company description**

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

**Price performance**

%	1m	3m	12m
Actual	(5.1)	12.2	11.5
Relative*	(3.8)	14.6	25.6

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Photocure (PHO)

**INVESTMENT SUMMARY**

Photocure specialises in photodynamic therapy. Its bladder cancer imaging product is sold as Hexvix in Europe and Cysview in the US. It improves detection rates and helps prolong recurrence-free survival. Photocure handles the marketing in Nordic countries and the US, while Ipsen is its marketing partner in the EU. Cevira is a Phase III-ready product for HPV-related diseases of the cervix and Visonac is a Phase III-ready product for acne. Both Cevira and Visonac are the subject of partnership discussions.

**INDUSTRY OUTLOOK**

Photocure is a photodynamic therapy company focused on bladder cancer imaging, HPV-related diseases and acne. 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 (fd) (öre)	P/E (x)	P/CF (x)
2014	129.0	(5.6)	1.5	7.0	580.0	N/A
2015	134.7	(22.0)	(17.4)	(82.0)	N/A	N/A
2016e	143.7	(16.5)	(11.7)	(54.0)	N/A	N/A
2017e	166.8	(3.0)	1.9	9.0	451.1	N/A

**Sector: Pharma & healthcare**

Price: €7.10  
 Market cap: €91m  
 Market: Euronext Paris

**Share price graph (€)**



**Company description**

Pixium is a French medical device company developing retinal implants for patients with complete vision loss. Its lead product Iris is an epi-retinal implant scheduled for CE mark approval in mid-2016; a sub-retinal implant (Prima) is in pre-clinical.

**Price performance**

%	1m	3m	12m
Actual	3.0	0.6	21.0
Relative*	5.9	6.2	37.5

\* % Relative to local index

**Analyst**

Pooya Hemami

## Pixium Vision (PIX)

**INVESTMENT SUMMARY**

Pixium Vision is developing two different retinal implant systems that transform images into electrical signals to restore vision in patients with severe retinal disease. The devices consist of an implant and a pair of glasses with an embedded camera, and handheld control. Pixium is conducting EU clinical trials with its Iris epiretinal implant, directed towards patients with retinitis pigmentosa. Patients have tolerated their implants well and improvements in visual perception have been observed; The firm anticipates CE mark approval in H216. Positive pre-clinical data with Prima, a subretinal implant potentially providing better visual acuity than Iris, and being advanced for macular degeneration, should support first human testing in H216. Pixium held €20m in cash at 31 March 2016.

**INDUSTRY OUTLOOK**

Second Sight (EYES) is commercialising an epiretinal implant (Argus II) in the US and EU. Pixium's newest Iris model offers 150 electrodes (vs 60 on Argus II), potentially offering better vision, while also being the first potentially explantable and upgradable epiretinal implant. Prima is less surgically invasive.

Y/E Jun	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	2.4	(10.8)	(11.6)	(118.4)	N/A	N/A
2015	3.3	(14.6)	(15.6)	(122.9)	N/A	N/A
2016e	4.4	(15.9)	(16.2)	(127.3)	N/A	N/A
2017e	6.5	(19.1)	(19.6)	(153.9)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.09  
 Market cap: A\$13m  
 Market: ASX

**Share price graph (A\$)**



**Company description**

Prescient Therapeutics (previously Virax) is an ASX-listed biotechnology company focused on developing novel products for the treatment of cancer. It has two products, PTX-100 and PTX-200 in clinical development for a range of cancers.

**Price performance**

%	1m	3m	12m
Actual	(19.8)	(9.1)	31.6
Relative*	(16.6)	(9.4)	40.2

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Prescient Therapeutics (PTX)

**INVESTMENT SUMMARY**

Prescient acquired two promising anti-cancer compounds that target major tumour survival pathways in 2014. The company's most advanced compound, PTX-200, is in Phase Ib/II trials in breast and ovarian cancers, while a Phase Ib trial in acute myeloid leukaemia will start in Q216. The breast cancer study has identified the recommended Phase II dose, and researchers will initiate an expansion cohort in 12 patients to better characterise the safety profile; interim data are expected to report in H216. The company's other drug candidate, PTX-100, is expected to begin a Phase Ib trial in breast cancer in 2017. Cash of A\$1.7m at 31 March, has since been boosted by an A\$7m placement in May and an ongoing A\$3.4m rights issue. Prescient appointed Steven Yatomi-Clarke as CEO in February 2016.

**INDUSTRY OUTLOOK**

PTX-200 is a specific inhibitor of Akt, a key component of one of the Ras signalling pathways. The three Ras genes in humans (HRAS, KRAS and NRAS) are the most common oncogenes in human cancer; mutations that permanently activate Ras are found in 20-25% of all human tumours. Celator Pharmaceuticals saw its stock price increase 10-fold after reporting positive results in a Phase III AML trial in March 2016, highlighting the strong interest in potential new AML drugs.

Y/E Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(1.8)	(1.8)	(5.94)	N/A	N/A
2015	0.3	(2.1)	(2.1)	(4.28)	N/A	N/A
2016e	0.2	(2.0)	(1.9)	(2.57)	N/A	N/A
2017e	0.3	(10.1)	(10.0)	(10.70)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.04  
 Market cap: A\$91m  
 Market: ASX

**Share price graph (A\$)**



**Company description**

Prima's pipeline is based on three products using a LAG-3 immune control system: IMP321 for cancer chemo-immunotherapy and partnered products IMP731 (GSK) and IMP701 (Novartis). Ph II asset CVac is an autologous dendritic cell vaccine.

**Price performance**

%	1m	3m	12m
Actual	(6.4)	2.3	(38.9)
Relative*	(2.6)	1.9	(34.9)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Prima BioMed (PRR)

**INVESTMENT SUMMARY**

Prima BioMed has a pipeline of three clinical assets (one partnered with GSK and a second partnered with Novartis), all based on a promising and versatile immunotherapy target Lymphocyte activation gene-3, LAG-3. The lead in-house LAG-3 product, IMP321, is being developed initially in metastatic breast cancer in combination with chemotherapy (211-patient randomised Phase IIb initiated Q415) and in melanoma in combination with the anti-PD1 check point inhibitor, Keytruda (Phase I initiated January 2016). Novartis and GSK have commenced clinical trials of partnered LAG3 programmes, providing additional validation for the LAG3 technology. Prima out-licensed its CVac dendritic vaccine, which improved overall survival in second remission ovarian cancer patients in the CAN-003 Phase II trial, to US-based Sydys in April 2016.

**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)
2014	2.0	(14.0)	(13.3)	(1.1)	N/A	N/A
2015	1.3	(13.3)	(12.9)	(0.9)	N/A	N/A
2016e	1.1	(14.6)	(14.5)	(0.8)	N/A	N/A
2017e	1.2	(14.7)	(14.4)	(0.7)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €19.50  
 Market cap: €145m  
 Market: Euronext Amsterdam

**Share price graph (€)**



**Company description**

Probiodrug is a biopharma company developing its clinical pipeline for the treatment of Alzheimer's. Lead product candidate, PQ912, has entered Ph IIa. PQ912 is a small molecule inhibitor of QC, which is essential for the formation of pGlu-Abeta. Two further products are in preclinical stages.

**Price performance**

%	1m	3m	12m
Actual	(1.3)	(20.4)	(7.6)
Relative*	1.2	(16.2)	3.3

\* % Relative to local index

**Analyst**

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 glutamyl cyclase, which is essential for the formation of pGlu-Abeta. Recruitment is on track for the Phase IIa study, SAPHIR, in early AD, with safety data expected by end of 2016 and exploratory efficacy data 3-4 months later. Recently, Probiodrug announced a positive outcome in the chronic animal toxicology studies confirming a favourable therapeutic margin for PQ912. The capital raise of €13.5m (gross) in November 2015 should extend the cash runway into 2017, incorporating the SAPHIR initial data readout, when Probiodrug may seek to partner PQ912.

**INDUSTRY OUTLOOK**

There are 44 million dementia sufferers worldwide, 60% of whom have AD. The lack of disease-modifying therapies leaves a vast unmet clinical need. Results from Biogen and Eli Lilly have revived confidence in the amyloid hypothesis. This, combined with a greater 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)
2014	0.0	(11.2)	(11.4)	(234.7)	N/A	N/A
2015	0.0	(13.3)	(13.5)	(196.1)	N/A	N/A
2016e	0.0	(14.4)	(14.2)	(190.6)	N/A	N/A
2017e	0.0	(11.2)	(11.2)	(149.8)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$0.15  
 Market cap: A\$32m  
 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	(3.1)	(3.1)	(22.5)
Relative*	0.8	(3.5)	(17.5)

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Regeneus (RGS)

**INVESTMENT SUMMARY**

Regeneus is developing and commercialising its adipose-derived mesenchymal stem cell technology for musculoskeletal conditions in animals and humans. In May 2016, the company announced the completion of enrolment of all 20 patients in the STEP randomised Phase I/II study of Progenza (allogeneic) in human osteoarthritis, and confirmed no safety concerns had been identified. Recent Japanese legislation offers an accelerated path to market for regenerative medicine products and the company aims to finalise manufacturing and clinical development partnerships in Japan in Q216. Regeneus also holds global rights to autologous cancer vaccine technologies for human (RGS4K - Phase I began in Q215) and veterinary (Kvax) applications. Cash at 31 March was A\$2.0m.

**INDUSTRY OUTLOOK**

Regeneus has firmed up its strategy to partner its product opportunities for development and commercialisation, allowing it to focus on early-stage product development. It has partnered with a top-5 global animal health company for development of CryoShot Canine, and will seek to identify wider applications of its off-the-shelf Progenza human stem cells, beyond the initial development for osteoarthritis. Cancer immunotherapy, including cancer vaccines such as RGS4K, is a biotech hotspot.

Y/E Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	2.0	(10.8)	(7.5)	(4.51)	N/A	N/A
2015	1.9	(9.8)	(6.6)	(3.15)	N/A	N/A
2016e	1.4	(6.1)	(3.9)	(1.88)	N/A	N/A
2017e	1.7	(6.2)	(4.0)	(1.92)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 3.1p  
 Market cap: £99m  
 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 IIa) and critical limb ischaemia (Phase I); and human retinal progenitor cells for retinitis pigmentosa (Phase I/II).

**Price performance**

%	1m	3m	12m
Actual	(7.4)	0.0	(41.9)
Relative*	(5.1)	2.8	(35.9)

\* % Relative to local index

**Analyst**

Linda Pomeroy

## ReNeuron Group (RENE)

**INVESTMENT SUMMARY**

ReNeuron is funded (£72m in cash at 30 September 2015) to undertake pivotal studies with two cell therapy-based programmes. This includes the CTX neural stem cell programme (a 21-patient Phase II study ongoing in stroke disability and six-patient Phase I for critical limb ischaemia) and the hRPC (human retinal progenitor cells) programme for retinitis pigmentosa (a 15-patient Phase I/II trial is underway in the US). Pivotal Phase II/III studies are planned for the stroke and RP programmes. Preclinical work continues on the exosome nanomedicine programme in oncology. The company recently relocated to a new GMP cell manufacturing and research facility in South Wales (funded by a £7.8m Welsh government grant).

**INDUSTRY OUTLOOK**

Stroke is a high-risk indication, but ReNeuron is attempting to demonstrate a meaningful reduction in disability that would offer a compelling case for further development and/or partnering (Phase IIa data in mid-2016 will determine next steps). The hRPC programme has Orphan (EU/US) and Fast Track (US) designation with a potentially pivotal Phase II/III study planned for 2017.

Y/E Mar	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2014	0.0	(7.9)	(7.8)	(0.50)	N/A	N/A
2015	0.0	(10.3)	(10.3)	(0.50)	N/A	N/A
2016e	0.0	(15.5)	(15.2)	(0.50)	N/A	N/A
2017e	0.0	(27.6)	(27.3)	(0.76)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$2.15  
 Market cap: US\$14m  
 Market: NASDAQ

**Share price graph (US\$)**

**Company description**

RXi is a clinical-stage RNAi company developing therapeutics in dermatology and ophthalmology. Lead projects, RXI-109 in dermal indications (Ph II) and in ocular for wet AMD (Ph I/II), stem from its proprietary self-delivering (sd-rxRNA) platform.

**Price performance**

%	1m	3m	12m
Actual	0.5	(25.9)	(48.8)
Relative*	(0.7)	(27.0)	(48.1)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## RXi Pharmaceuticals (RXII)

**INVESTMENT SUMMARY**

RXi is currently advancing 3 projects in clinical programmes based on its self-delivering RNAi (sd-rxRNA) technology. RXI-109, an sd-rxRNA compound, is in clinical development for the treatment of dermal (Ph II) and ocular scarring (Ph I/II). Preliminary safety data is expected in H216 from the ocular trial. RXi also initiated a Phase II trial with their in-licensed Samcyprone in common warts. Two candidates targeting collagenase and tyrosinase are in laboratory testing for use in the large cosmetic market for skin lightening and skin rejuvenation. RXi recently reported it is exploring strategic business options including potential M&A.

**INDUSTRY OUTLOOK**

RXi focuses primarily on dermatology and ophthalmology. Lead clinical projects, RXI-109 in dermal indications (Phase II) and in ocular for wet AMD (Phase I/II), stem from its proprietary self-delivering (sd-rxRNA) platform. Licensed-in immunomodulator Samcyprone is initially being developed for warts, alopecia areata and melanoma.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	0.1	(7.1)	(7.0)	(42.0)	N/A	N/A
2015	0.0	(8.6)	(8.5)	(17.0)	N/A	N/A
2016e	0.0	(11.1)	(11.3)	(174.0)	N/A	N/A
2017e	0.0	(12.4)	(13.1)	(201.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 21.16PLN  
 Market cap: PLN284m  
 Market: Warsaw Stock Exchange

**Share price graph (PLN)**

**Company description**

Selvita is a drug discovery services provider based in Poland. It employs 300 staff (30% PhDs) and operates two main business units: Innovations Platform (internal NME pipeline) and Research Services (medicinal chemistry/biology, biochemistry).

**Price performance**

%	1m	3m	12m
Actual	(4.7)	(3.8)	30.9
Relative*	0.3	6.6	73.2

\* % Relative to local index

**Analyst**

Jonas Peciulis

## Selvita (SLV)

**INVESTMENT SUMMARY**

Selvita is a rapidly emerging drug discovery and research services company. Operating off a solid base from its profitable contract research business, the company is also developing its own novel oncology compounds, currently self-financed but potentially through partnerships. Most advanced are two preclinical kinase inhibitor programmes: SEL24 (dual PIM/FLT3 inhibitor, for AML) expected to enter Phase I in H216, and SEL120 (CDK8 inhibitor, colon cancer and other malignancies) about to begin IND-enabling studies and move to Phase I in 2017. Multiple collaborations signed with partners such as Merck KGaA and H3 Biomedicine (Eisai) validate Selvita's research capabilities. Cash of PLN29.6m at end March 2016, bolstered by profits from research service contracts, is sufficient to fund current 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 and safety 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)
2014	41.6	7.6	5.4	55.91	37.8	N/A
2015	56.1	10.2	7.6	83.58	25.3	N/A
2016e	66.9	9.3	5.8	43.96	48.1	N/A
2017e	76.5	12.8	8.7	63.20	33.5	N/A

**Sector: Pharma & healthcare**

Price: US\$0.38  
 Market cap: US\$4m  
 Market: NASDAQ

**Share price graph (US\$)**

**Company description**

StemCells is focused on developing and commercialising stem cell-based therapeutics. Its lead product, HuCNS-SC (human neural stem cells), is in clinical development for spinal cord injury and age-related macular degeneration.

**Price performance**

%	1m	3m	12m
Actual	(86.4)	(87.6)	(95.3)
Relative*	(86.5)	(87.8)	(95.3)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## StemCells (STEM)

**INVESTMENT SUMMARY**

StemCells Inc. is a development stage cell therapy company. After initially reporting highly encouraging data from the first cohort of its Phase II PATHWAY study in spinal cord injury (SCI), the company announced that an interim analysis of the second cohort suggested that the trial was unlikely to succeed. Hence, they are commencing an orderly wind-down of operations.

**INDUSTRY OUTLOOK**

StemCells is a US company developing stem cell-based therapeutics. Stemcells' HuCNS-SC are allogeneic cells derived from donor human neural stem cells, adopting a homologous approach.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	1.0	(32.2)	(32.2)	(6.8)	N/A	N/A
2015	0.1	(37.5)	(36.8)	(4.6)	N/A	N/A
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: €52.21  
 Market cap: €618m  
 Market: Deutsche Börse

**Share price graph (€)**

**Company description**

Stratec designs and manufactures OEM diagnostic instruments. Design and assembly of systems from modules is in Germany and Switzerland. There is a US subsidiary, a UK middleware company and a Berlin business.

**Price performance**

%	1m	3m	12m
Actual	3.1	21.7	13.5
Relative*	5.9	25.0	29.4

\* % Relative to local index

**Analyst**

Dr John Savin

## Stratec Biomedical (SBS)

**INVESTMENT SUMMARY**

Stratec has announced its intention to acquire an Austrian business, Sony DADC Biosciences, that designs and manufactures complex precision consumables for high-end biomedical and diagnostic systems. This is an excellent strategic fit as it will allow Stratec to integrate high-value consumables into system designs and accumulate recurring revenues: Stratec expects a 20% CAGR to 2020 on DADC 2015 sales of €17m. Stratec is experiencing reduced Chinese orders and the guided 5% EBIT of DADC may lower the 2017 EBIT margin to around 17%.

**INDUSTRY OUTLOOK**

Stratec has issued guidance on core sales to 6% CAGR (2013-17). The Diatron acquisition adds about €25m revenue in FY16 and €37m in FY17. Sony DADC may add €5m in 2016 and perhaps €20m in 2017 making Edison forecast revenues of €183.5m in 2016 and rising to perhaps €220m in 2017. Fresh management guidance will be issued in Q316. Stratec has a €50m bridging loan to part fund the €97m of acquisitions to date in 2016.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	144.9	31.1	29.7	215.6	24.2	15.9
2015	146.9	36.1	34.9	252.9	20.6	19.1
2016e	183.5	38.0	35.6	248.9	21.0	20.6
2017e	220.1	43.6	41.2	286.1	18.2	14.7



**Sector: Pharma & healthcare**

Price: US\$0.55  
 Market cap: US\$48m  
 Market: NASDAQ

**Share price graph (US\$)**

**Company description**

Sunesis Pharmaceuticals is a pharmaceutical company focused on oncology. The lead asset is Qinprezo, a chemotherapy for AML in the approval process in the EU. The company has also developed SNS-062, a BTK inhibitor for CLL for Imbruvica refractory patients currently in Phase I.

**Price performance**

%	1m	3m	12m
Actual	10.6	10.0	(79.1)
Relative*	9.3	8.4	(78.8)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Sunesis Pharmaceuticals (SNSS)

**INVESTMENT SUMMARY**

Sunesis is a pharmaceutical company developing small molecule oncology drugs. Its lead program is Qinprezo, a quinolone derivative for relapsed/refractory acute myeloid leukemia (AML) without the dose limiting cardiotoxicity of anthracyclines. The FDA discouraged submitting an NDA after it missed its primary endpoint, but significant potential remains in Europe where Qinprezo has data comparable to those used in other related approvals. Sunesis is also advancing its clinical asset, SNS-062, a novel non-covalent, oral BTK inhibitor that may work in Imbruvica relapsed and refractory patients.

**INDUSTRY OUTLOOK**

Sunesis is an oncology company with a late-stage asset, potentially near European approval, as well as preclinical assets utilising promising targets, making it an attractive partner.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	5.7	(41.3)	(43.0)	(71.60)	N/A	N/A
2015	3.1	(35.8)	(36.7)	(50.29)	N/A	N/A
2016e	2.4	(34.6)	(36.1)	(47.39)	N/A	N/A
2017e	1.7	(43.6)	(48.1)	(60.15)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €1.48  
 Market cap: €25m  
 Market: FRA

**Share price graph (€)**

**Company description**

Sygnis develops tools for molecular biologists. Its main focus is in the field of polymerases for the amplification and sequencing of DNA. Sygnis launched its own TruePrime and SunScript branded products in 2015.

**Price performance**

%	1m	3m	12m
Actual	4.5	(22.3)	(55.7)
Relative*	7.3	(20.2)	(49.6)

\* % Relative to local index

**Analyst**

Dr John Savin

## Sygnis (LIO1)

**INVESTMENT SUMMARY**

Sygnis sells its own-brand TruePrime and SunScript kits through an international distributor network and direct through its website. Sygnis reported €550k in 2015 sales. Management has reduced its 2016 sales guidance to €1.5m from €2.5m. The 2015 loss was €4m (€3.2m normalised) with operating cash flow of -€3.6m and cash of €4.6m.

**INDUSTRY OUTLOOK**

Sygnis intends to acquire a private UK proteomics consumables company: Expedeon. The businesses are complementary with Sygnis producing innovative molecular biology kits and Expedeon making cleverly-designed but standard products for protein analysis. Expedeon is growing at a CAGR of about 20%. The impact in 2016 is limited as the deal will not complete till mid-year and integration and training will take some months. Synergies could become apparent from 2017. The combined business will remain loss making till the molecular biology kits are better established.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.4	(1.7)	(1.9)	(19.27)	N/A	N/A
2015	0.6	(2.4)	(2.6)	(19.31)	N/A	N/A
2016e	3.2	(0.9)	(1.0)	(3.78)	N/A	N/A
2017e	6.9	0.2	0.1	0.36	411.1	10952.0

**Sector: Pharma & healthcare**

Price: ¥248.00  
Market cap: ¥8542m  
Market: Tokyo

**Share price graph (¥)**

**Company description**

SymBio is a specialty pharma company with a focus on oncology, haematology and pain management. Treakisym was in-licensed from Astellas in 2005. Rigosertib was in-licensed from Onconova and IONSYS in-licensed from The Medicines Company.

**Price performance**

%	1m	3m	12m
Actual	(17.1)	10.7	(14.5)
Relative*	(11.4)	20.3	11.7

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Symbio Pharmaceuticals (4582)

**INVESTMENT SUMMARY**

SymBio is well on the way to becoming a key speciality pharma partner for Asia-Pacific markets. The company has in-licensing deals for two orphan blood cancer products and recently signed a deal for a pain management device. Treakisym is approved for r/r iNHL/MCL patients and is awaiting approval for additional indications. Rigosertib is in development for myelodysplastic syndromes and is starting a pivotal Phase III global study, with interim results expected in 2017. IONSYS was in-licensed from The Medicines Company and SymBio expects to launch IONSYS in 2019. SymBio plans to build its own salesforce to support rigosertib and IONSYS.

**INDUSTRY OUTLOOK**

SymBio is focused on in-licensing niche opportunities in hard-to-treat indications often overlooked by big pharma. Building its own commercial infrastructure in the future should help establish SymBio more firmly as a partner of choice in Asia-Pacific. 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 (¥)	P/E (x)	P/CF (x)
2014	1955.0	(1134.0)	(1116.0)	(36.39)	N/A	N/A
2015	1933.0	(2641.0)	(2640.0)	(81.61)	N/A	N/A
2016e	1951.0	(2725.0)	(2733.0)	(84.51)	N/A	N/A
2017e	2290.0	(3295.0)	(3326.0)	(102.80)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €7.42  
Market cap: €36m  
Market: Euronext Paris

**Share price graph (€)**

**Company description**

Theracision, based in southern Paris, sells a high-precision, high-intensity ultrasound system (EchoPulse) in Europe and Asia for non-invasive treatment of benign breast and thyroid growths. A US clinical programme is underway. A single-use consumable is required per treatment.

**Price performance**

%	1m	3m	12m
Actual	14.3	23.7	(11.0)
Relative*	17.5	30.6	1.2

\* % Relative to local index

**Analyst**

Dr John Savin

## Theracision (ALTHE)

**INVESTMENT SUMMARY**

Theracision sells the CE-marked EchoPulse ultrasound device and disposable EPack skin cooling unit to treat benign, but troublesome breast lumps: fibroadenomas (FA) and palpable thyroid nodules. EchoPulse leaves no ugly scars and carries zero infection risk. In 2015, Theracision sold or leased 12 systems for evaluation, mainly in Germany and Asia. In 2016, management expects to sell at least 20 systems. Cash at 31 December 2015 was €3.75m. A €1.78m placing of 0.39m shares at €4.54/share with a major Chinese investor was announced on 2 May.

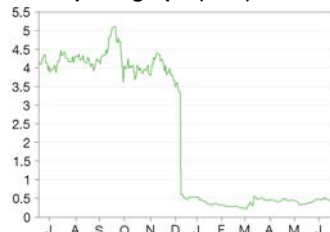
**INDUSTRY OUTLOOK**

At least 10% of women develop benign breast fibroadenomas (FA), usually while young, and up to 50% regress. A new study from Tübingen University in FA found that after 12 months 24/27 of patients were without residual vital BFA tissue. In June, Klinikum Stephansplatz-Hamburg started to offer Echotherapy to its patients. In thyroid treatment, in the first four months of 2016, +115% more treatments were performed compared to the same period in 2015.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.8	(4.7)	(4.8)	(122.1)	N/A	N/A
2015	1.6	(6.9)	(7.0)	(142.9)	N/A	N/A
2016e	5.9	(3.4)	(3.6)	(58.6)	N/A	N/A
2017e	8.7	(2.1)	(2.3)	(31.3)	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$0.40  
 Market cap: US\$29m  
 Market: NASDAQ

**Share price graph (US\$)**

**Company description**

Threshold is focused on tumour hypoxia, a low-oxygen condition found in most solid tumours and some blood cancers. Evofosfamide is in Ph III for STS and pancreatic cancer and earlier trials in other cancers. It is partnered with Merck KGaA.

**Price performance**

%	1m	3m	12m
Actual	8.1	(16.8)	(90.3)
Relative*	6.9	(18.1)	(90.1)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Threshold Pharmaceuticals (THLD)

**INVESTMENT SUMMARY**

Evofosfamide, the lead product under development, has not met the primary endpoint of improving overall survival in two Phase III trials in soft tissue sarcoma (STS) and pancreatic cancer. Although some benefit was seen in pancreatic cancer, as well as in Asian patients, partner Merck KGaA will not file either indication with regulators and will return the product to Threshold. Threshold is currently focusing on gaining clarity from the Japanese PMDA on the potential path forward in Japan in pancreatic cancer. Threshold is now trading at a discount to its net cash level.

**INDUSTRY OUTLOOK**

Threshold is focused on tumour hypoxia, conditions of low oxygen. Hypoxic regions are commonly found in solid tumours and can lead to resistance to traditional chemo and radiotherapy.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	14.7	(29.9)	(21.8)	(35.77)	N/A	N/A
2015	76.9	27.6	43.8	55.79	0.7	N/A
2016e	0.0	(18.3)	(18.3)	(23.98)	N/A	N/A
2017e	0.0	(24.7)	(24.7)	(30.99)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 18.8p  
 Market cap: £143m  
 Market: AIM

**Share price graph (p)**

**Company description**

Tissue Regenix is a UK-based company developing and commercialising medical devices for regeneration of soft tissue. It has three divisions including a US-based wound care subsidiary, orthopaedics/sports medicine and a cardiac division.

**Price performance**

%	1m	3m	12m
Actual	4.2	(8.5)	4.2
Relative*	6.7	(5.9)	14.8

\* % Relative to local index

**Analyst**

Linda Pomeroy

## Tissue Regenix Group (TRX)

**INVESTMENT SUMMARY**

Tissue Regenix's (TRX) investment case is built on dCELL, a versatile regenerative medical technology, and its potential across wound care, orthopaedics and cardiac implants. We forecast that US wound care will be the initial driver of rapid sales growth from £0.8m in FY16, rising to £74m in FY21, boosted by product launches from all three divisions. Recently the company has made progress on multiple fronts, including an increase in distribution reach for DermaPure, including a dermal substitute for hard-to-heal chronic wounds and acute wounds in the US, and approval of SurgiPure XD, a porcine dermis Xenograft for use in hernia repair in the US. Meanwhile, the Orthopaedics division targets the significant medical need in meniscus and anterior cruciate ligament (ACL) repair with a potential CE mark submission and grant for OrthoPure HM and XT in 2017. Further, TRX took a first step towards the commercialisation of human dCELL heart valves and DermaPure in the EU through a JV agreement with the German tissue bank in January. TRX held €19.9m in cash at FY16.

**INDUSTRY OUTLOOK**

The adoption of biological, as opposed to standard treatments, is driven by the need for earlier intervention, cost savings and longer-term healing solutions.

Y/E Jan	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (p)	P/E (x)	P/CF (x)
2015	0.1	(8.2)	(8.2)	(1.19)	N/A	N/A
2016	0.8	(10.0)	(10.0)	(1.36)	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A
2018e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: US\$1.97  
 Market cap: US\$49m  
 Market: NASDAQ

**Share price graph (US\$)**



**Company description**

Tonix is an emerging specialty pharmaceutical focused on psychiatric and neurological disorders. TNX-102 SL for fibromyalgia is the most advanced programme, entering Ph III. It is also being developed for PTSD.

**Price performance**

%	1m	3m	12m
Actual	(31.1)	(14.0)	(81.1)
Relative*	(31.9)	(15.2)	(80.8)

\* % Relative to local index

**Analyst**

Maxim Jacobs

## Tonix Pharmaceuticals (TNXP)

**INVESTMENT SUMMARY**

Tonix has two programmes in development: TNX-102 SL is a sublingual version of cyclobenzaprine (CBP), which is being developed for both fibromyalgia and post-traumatic stress disorder (PTSD). The company recently completed enrolment for its Phase III AFFIRM trial in fibromyalgia with data expected in Q316. Data for its 237-patient, Phase II proof-of-concept trial in PTSD were announced in May and showed a statistically significant benefit to patients in the primary endpoint at the high dose (5.6mg). As this trial was in those with military-related PTSD, these data are especially significant, as little to no efficacy has been seen in these patients previously with other medications.

**INDUSTRY OUTLOOK**

Tonix is an emerging specialty pharmaceutical company focused on psychiatric and neurological disorders, with two programmes, TNX-102 SL for fibromyalgia and PTSD.

Y/E Dec	Revenue (US\$m)	EBITDA (US\$m)	PBT (US\$m)	EPS (c)	P/E (x)	P/CF (x)
2014	0.0	(27.7)	(27.6)	(277.0)	N/A	N/A
2015	0.0	(48.2)	(48.1)	(286.0)	N/A	N/A
2016e	0.0	(41.3)	(41.1)	(240.0)	N/A	N/A
2017e	0.0	(45.1)	(48.1)	(270.0)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €2.59  
 Market cap: €100m  
 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	(5.5)	(9.8)	(44.8)
Relative*	(2.8)	(4.7)	(37.2)

\* % Relative to local index

**Analyst**

Juan Pedro Serrate

## Transgene (TNG)

**INVESTMENT SUMMARY**

Transgene has completed its restructuring plan (launched in June 2015) and is now focused on advancing the clinical development of its cancer immunotherapy products (oncolytic virus Pexa-Vec and MUC1 cancer vaccine TG4010) in combination with immune checkpoint inhibitors (ICIs). Discussions with clinical/pharma partners are underway to start five Phase II trials, including TG4010+ICI in the first/second-line treatment of NSCLC and Pexa-Vec+ICI in the first-line treatment of liver cancer/other solid tumours. The first studies should start in mid-2016 with potential readouts by end-2017. Meanwhile, partner Sillajen has now initiated a global 600-patient Phase III study in liver cancer. Transgene has secured fresh finance of up to €30m, via a €20m EIB loan and a €10m commitment by the Institut Mérieux (52% majority shareholder). Last stated cash is €23.5m (31 March 2016).

**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)
2014	11.1	(35.5)	(38.9)	(103.25)	N/A	N/A
2015	9.6	(25.7)	(28.9)	(78.08)	N/A	N/A
2016e	6.1	(23.9)	(27.2)	(70.55)	N/A	N/A
2017e	7.8	(27.9)	(31.5)	(81.87)	N/A	N/A

**Sector: Pharma & healthcare**

Price: €4.32  
 Market cap: €56m  
 Market: Euronext Paris

**Share price graph (€)**

**Company description**

TxCell is a pioneer in developing regulatory T-cell immune therapies against autoimmune and inflammatory disorders. The lead product in Crohn's refractory disease is due to restart Phase IIb in mid-2016. A novel CAR Treg technology platform is in early development.

**Price performance**

%	1m	3m	12m
Actual	(13.4)	(23.4)	(45.6)
Relative*	(11.0)	(19.1)	(38.1)

\* % Relative to local index

**Analyst**

Dr John Savin

## TxCell (TXCL)

**INVESTMENT SUMMARY**

TxCell offers a rare investment opportunity in the regulatory T-cell (Treg) area with major potential in inflammatory and autoimmune disorders. TxCell is restarting the Ovasave Phase IIb study in refractory Crohn's disease; data are due by early 2018. A flexible CAR Treg platform is being developed with leading academic partners to address indications like lupus nephritis, bullous pemphigoid and perhaps multiple sclerosis. The CAR platform could be an excellent basis for partnering and licensing. A funding deal for €20m plus €10m in warrant proceeds requires EGM approval.

**INDUSTRY OUTLOOK**

The lead product, Ovasave, uses an ovalbumin (egg white) trigger to activate regulatory T-cells. Once activated, these autologous, cultured cells are intended to control the inflammatory response in Crohn's disease. The target market is about 100,000 patients who have failed on biological therapy. An efficient manufacturing system is being developed to obtain a commercial cost of goods and speed delivery times.

Y/E Dec	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (c)	P/E (x)	P/CF (x)
2014	1.4	(8.7)	(8.7)	(82.6)	N/A	N/A
2015	1.6	(10.8)	(10.7)	(87.4)	N/A	N/A
2016e	0.0	(14.5)	(14.5)	(118.3)	N/A	N/A
2017e	0.0	(18.3)	(18.3)	(148.8)	N/A	N/A

**Sector: Pharma & healthcare**

Price: 554.0p  
 Market cap: £1365m  
 Market: LSE

**Share price graph (p)**

**Company description**

UDG is a leading international provider of services to healthcare manufacturers and pharmacies. It employs 8,300 staff and is present in 22 countries. Its three divisions are Ashfield Commercial & Medical Services, Supply Chain Services and Sharp Packaging Services.

**Price performance**

%	1m	3m	12m
Actual	(7.0)	(3.7)	9.2
Relative*	(4.8)	(1.0)	20.3

\* % Relative to local index

**Analyst**

Lala Gregorek

## UDG Healthcare (UDG)

**INVESTMENT SUMMARY**

UDG Healthcare is a rare European play in the dynamic market for outsourcing in the commercial healthcare sector. The divestment of its drug distribution and travel health businesses closed on 1 April. Having secured the €378m net disposal proceeds, we estimate that UDG should be able to raise €700m funding for acquisitions and investments in its faster-growing outsourcing activities, Sharp and Ashfield. H116 reported on 19 May and our valuation and forecasts are currently under review.

**INDUSTRY OUTLOOK**

The market for outsourcing in the commercial healthcare sector is growing by 6-8% per year, some 1.5-2pt higher than the underlying markets. The strong growth stems from the drive by healthcare products manufacturers to reduce their fixed costs and improve their efficiency, but also the growing complexity of the marketplace. We consider UDG well placed to gain market share, since its strong compliance culture differentiates it from smaller competitors.

Y/E Sep	Revenue (€m)	EBITDA (€m)	PBT (€m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	2127.0	123.0	87.0	28.8	24.6	18.4
2015	919.0	114.0	84.0	27.4	25.8	10.5
2016e	N/A	N/A	N/A	N/A	N/A	N/A
2017e	N/A	N/A	N/A	N/A	N/A	N/A

**Sector: Pharma & healthcare**

Price: 40.0p  
 Market cap: £210m  
 Market: AIM

**Share price graph (p)**



**Company description**

Vernalis is a UK speciality pharma company with an FDA-approved, prescription-only cough cold treatment, Tuzistra XR; an FDA approved amoxicillin, Moxatag; and a late-stage US cough cold pipeline of four products.

**Price performance**

%	1m	3m	12m
Actual	(18.2)	(23.1)	(43.1)
Relative*	(16.2)	(20.9)	(37.2)

\* % Relative to local index

**Analyst**

Lala Gregorek

## Vernalis (VER)

**INVESTMENT SUMMARY**

Vernalis's \$40m equity raise in May (80m new shares at 50p/share) will cover a conservative Tuzistra XR roll-out, Moxatag relaunch and future launches of the remaining four US cough cold programmes. Modest Tuzistra XR sales of £0.6m were reported for the first four months of launch due to a mild cough cold season. US launch of this prescription-only (Rx), extended-release (ER) cough cold medicine is the first step in Vernalis's transition into a commercial speciality pharma company, targeting a \$3.5bn market opportunity. Emphasis for year one of Tuzistra XR commercialisation is operational: establishing the platform for future sales growth. The US cough cold Rx ER R&D pipeline should also achieve milestones this year: completion of comparative bioavailability studies by CCP-07 (multiple dose) and CCP-08 (single dose) means NDA filing of both remains on track by end-CY16.

**INDUSTRY OUTLOOK**

Generic IR liquid products dominate the US Rx cough cold market, reflecting difficulties in formulating ER liquids that satisfy current FDA regulations; Tuzistra XR meets these standards. Favourable pricing and reimbursement of the five cough cold products in development by Vernalis would value the addressable market at up to \$3.5bn.

Y/E Jun	Revenue (£m)	EBITDA (£m)	PBT (£m)	EPS (fd) (p)	P/E (x)	P/CF (x)
2013	14.1	(4.7)	(4.7)	(0.8)	N/A	N/A
2015	19.9	(8.9)	(6.9)	(1.0)	N/A	N/A
2016e	11.3	(28.3)	(25.8)	(5.4)	N/A	N/A
2017e	17.3	(24.5)	(24.5)	(4.5)	N/A	N/A

**Sector: Pharma & healthcare**

Price: A\$1.07  
 Market cap: A\$255m  
 Market: ASX, OTC QX

**Share price graph (A\$)**



**Company description**

Viralytics is a biopharmaceutical company developing Cavatak oncolytic virotherapy to target late-stage melanoma and other solid tumour types. It is trialling Cavatak as a monotherapy and in combination with checkpoint inhibitors.

**Price performance**

%	1m	3m	12m
Actual	36.1	60.4	51.4
Relative*	41.5	59.8	61.3

\* % Relative to local index

**Analyst**

Dr Dennis Hulme

## Viralytics (VLA)

**INVESTMENT SUMMARY**

Viralytics is well-positioned to benefit from industry interest in oncolytic virotherapy. Four of the first six (67%) patients with advanced melanoma experienced confirmed objective responses (including two complete responses) following treatment with Cavatak in combination with the immune checkpoint inhibitor Yervoy (ipilimumab), in the Phase Ib MITCI trial. This impressive preliminary response rate compares to response rates of 28% and 11% reported for Cavatak and Yervoy, respectively, as single agents in advanced melanoma. Other ongoing trials include the Phase I/II STORM study in multiple solid cancers, the Phase I CANON trial in superficial bladder cancer and an open-label Phase Ib trial of Cavatak in combination with Keytruda (pembrolizumab) in late-stage melanoma. Viralytics and Merck are collaborating on Keynote 200 (STORM Part B), a Phase Ib trial of Cavatak and Keytruda in advanced lung and bladder cancer. Cash at 31 March was A\$46m.

**INDUSTRY OUTLOOK**

The emergence of targeted and immunotherapy agents in recent years is redefining the treatment paradigm in metastatic melanoma. The FDA approval of Amgen's Imlygic (T-vec) has made oncolytic virotherapy a commercial reality.

Y/E Jun	Revenue (A\$m)	EBITDA (A\$m)	PBT (A\$m)	EPS (fd) (c)	P/E (x)	P/CF (x)
2014	2.5	(4.9)	(4.7)	(3.9)	N/A	N/A
2015	2.5	(6.0)	(5.5)	(3.0)	N/A	N/A
2016e	4.4	(10.2)	(9.9)	(4.7)	N/A	N/A
2017e	4.4	(10.2)	(9.4)	(4.0)	N/A	N/A

Sector: Pharma & healthcare

Price: US\$3.34  
 Market cap: US\$78m  
 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 NuQ technology. Its lead program is in colorectal cancer, which may enter the European market in 2016.

**Price performance**

%	1m	3m	12m
Actual	(1.8)	(8.0)	(18.5)
Relative*	(2.9)	(9.3)	(17.4)

\* % Relative to local index

**Analyst**

Maxim Jacobs

# VolitionRx (VNRX)

**INVESTMENT SUMMARY**

VolitionRx's proprietary NuQ 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). The company expects a CE Mark for a full panel of tests and an initial European launch at the end of this year. The company also announced that it is initiating a study with DKFZ, the German Cancer Research Center, to evaluate NuQ blood tests for the detection of pancreatic cancer. This follows two successful pilot studies using its biomarkers in pancreatic cancer. A US 510(k) approval and launch is expected by the end of 2017.

**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)
2014	0.0	(5.9)	(8.4)	(62.08)	N/A	N/A
2015	0.0	(10.0)	(9.7)	(54.49)	N/A	N/A
2016e	0.8	(13.9)	(13.9)	(59.19)	N/A	N/A
2017e	2.2	(18.1)	(18.1)	(74.22)	N/A	N/A

## Company coverage

Company	Note	Date published
<a href="#">4SC</a>	Update; Update	19/05/2016; 13/06/2016
<a href="#">aap Implantate AG</a>	Update; Update	30/06/2015; 24/08/2015
<a href="#">Abzena</a>	Update; Update	15/12/2015; 10/02/2016
<a href="#">Achillion Pharmaceuticals</a>	Update; Update	21/07/2015; 26/01/2016
<a href="#">Actinium Pharmaceuticals</a>	Update; Update	09/02/2015; 18/03/2015
<a href="#">Adherium</a>	Initiation	20/04/2016
<a href="#">Alexza Pharmaceuticals</a>	Update; Flash	08/03/2016; 11/05/2016
<a href="#">Allergy Therapeutics</a>	Update; Update	07/07/2015; 30/03/2016
<a href="#">Amarantus BioScience</a>	Update; Update	21/03/2016; 19/04/2016
<a href="#">Angle</a>	Update; Update	9/04/2016; 27/05/2016
<a href="#">Animalcare Group</a>	Update; Update	22/01/2015; 13/07/2015
<a href="#">Athersys</a>	Outlook; Update	14/12/2015; 04/03/2016
<a href="#">Atossa Genetics</a>	Initiation; Update	17/02/2016; 27/05/2016
<a href="#">Avacta Group</a>	Update; Flash	05/06/2015; 16/07/2015
<a href="#">Balda</a>	Update; Flash	19/05/2015; 25/09/2015
<a href="#">Basilea Pharmaceuticals</a>	Initiation; Update	23/03/2016; 22/04/2016
<a href="#">Bavarian Nordic</a>	Update; Outlook	26/04/2016; 02/06/2016
<a href="#">BioLineRx</a>	Update; Flash	11/12/2014; 09/02/2016
<a href="#">Bionomics</a>	Update; Outlook	10/03/2014; 09/02/2015
<a href="#">Bionor Pharma</a>	Update; Update	13/08/2015; 01/03/2016
<a href="#">Biotie Therapies Corp</a>	Update; Flash	20/11/2015; 19/01/2016
<a href="#">Brainstorm Cell Therapeutics</a>	Initiation	23/09/2015
<a href="#">BTG</a>	Update; Update	30/11/2015; 08/04/2016
<a href="#">C4X Discovery</a>	Flash; Update	02/03/2016; 29/03/2016
<a href="#">Carmat</a>	Update; Update	04/02/2015; 30/11/2015
<a href="#">Celyad</a>	Update; Update	13/11/2015; 28/01/2016
<a href="#">Cerulean Pharma</a>	Update; Update	16/03/2016; 17/05/2016
<a href="#">Clinigen Group</a>	Update; Update	13/10/2015; 25/01/2016
<a href="#">Consort Medical</a>	Update; Outlook	29/06/2015; 16/03/2016
<a href="#">Cytori Therapeutics</a>	Update; QuickView	11/06/2015; 02/10/2015
<a href="#">DBV Technologies</a>	Update; Update	11/06/2015; 09/12/2015
<a href="#">Dechra Pharmaceuticals</a>	Flash; Flash	03/08/2015; 10/09/2015
<a href="#">Derma Sciences</a>	Outlook; Update	30/03/2015; 26/05/2015
<a href="#">e-Therapeutics</a>	Update; Outlook	18/02/2016; 19/05/2016
<a href="#">Erytech Pharma</a>	Update; Update	15/10/2015; 17/12/2015
<a href="#">Evolva</a>	Update; Update	18/05/2015; 06/04/2016
<a href="#">Evotec</a>	Update; Update	02/07/2015; 20/11/2015
<a href="#">GenticeL</a>	Update; Update	10/02/2016; 07/06/2016
<a href="#">GW Pharmaceuticals</a>	Update; Update	08/04/2015; 08/06/2016
<a href="#">Halozyme Therapeutics</a>	Update	13/04/2015
<a href="#">Hutchison China Meditech</a>	Update; Update	20/01/2015; 05/03/2015
<a href="#">Hybrigenics</a>	Outlook; Update	15/02/2016; 18/05/2016



<a href="#">Imperial Innovations</a>	Outlook; Flash	14/06/2016; 20/06/2016
<a href="#">Imugene</a>	Update; Outlook	09/07/2015; 21/02/2016
<a href="#">IXICO</a>	Outlook; Update	11/06/2015; 02/09/2015
<a href="#">Medigene</a>	Update; Update	06/04/2016; 19/05/2016
<a href="#">Mesoblast</a>	Update; Update	18/02/2016; 11/05/2016
<a href="#">Midatech</a>	Outlook; Update	30/06/2015; 18/12/2015
<a href="#">Mologen</a>	Outlook; Update	14/12/2015; 13/04/2016
<a href="#">MorphoSys</a>	Update; Outlook	17/12/2015; 17/05/2016
<a href="#">Nanobiotix</a>	Update; Outlook	01/02/2016; 31/05/2016
<a href="#">Neovacs</a>	Update; Update	27/01/2015; 23/04/2015
<a href="#">NetScientific</a>	Portfolio overview	13/06/2016
<a href="#">Newron Pharmaceuticals</a>	Update; Flash	15/03/2016; 31/03/2016
<a href="#">Nexstim</a>	Update; Update	01/03/2016; 25/04/2016
<a href="#">Novogen</a>	Update; Update	19/10/2015; 09/05/2016
<a href="#">Omega Diagnostics</a>	Update; Update	12/11/2015; 07/12/2015
<a href="#">Onxeo</a>	Outlook; Update	08/09/2015; 22/12/2015
<a href="#">Opexa Therapeutics</a>	Update; Update	23/03/2016; 01/04/2016
<a href="#">Orexigen Therapeutics</a>	Initiation; Update	14/12/2015; 12/04/2016
<a href="#">Orexo</a>	Outlook; Update	17/02/2016; 09/05/2016
<a href="#">Oryzon Genomics</a>	Initiation; Update	10/03/2016; 20/05/2016
<a href="#">Oxford BioMedica</a>	Update; Outlook	05/05/2015; 27/07/2015
<a href="#">Pacific Edge</a>	Update; Update	17/08/2015; 17/11/2015
<a href="#">Paion</a>	Update; Update	17/02/2016; 17/05/2016
<a href="#">PDL BioPharma</a>	Update; Update	19/11/2015; 04/03/2016
<a href="#">PharmaMar</a>	Update	10/03/2016; 05/05/2016
<a href="#">Photocure</a>	Update; Update	07/03/2016; 25/05/2016
<a href="#">Prescient Therapeutics</a>	Update; Update	28/09/2015; 02/03/2016
<a href="#">Pixium Vision</a>	Outlook; Update	21/09/2015; 08/01/2016
<a href="#">Prima BioMed</a>	Update; Update	19/10/2015; 04/01/2016
<a href="#">Probiodrug</a>	Update; Update	31/03/2016; 14/04/2016
<a href="#">Regeneus</a>	Update; Update	02/12/2015; 19/05/2016
<a href="#">Relmada Therapeutics</a>	Update; Flash	12/10/2015; 10/12/2015
<a href="#">ReNeuron Group</a>	Update; Update	29/10/2015; 24/03/2016
<a href="#">RXi Pharmaceuticals</a>	Initiation; Update	03/11/2015; 18/04/2016
<a href="#">Selvita</a>	Update	25/04/2016; 17/06/2016
<a href="#">Skyepharma</a>	Update; Update	04/12/2015; 18/01/2016
<a href="#">SQL Diagnostics</a>	Update; Outlook	29/09/2014; 06/02/2015
<a href="#">StemCells</a>	Update; Update	01/09/2015; 05/02/2016
<a href="#">Stratec Biomedical</a>	Update; Update	04/04/2016; 15/06/2016
<a href="#">Sunesis Pharmaceuticals</a>	Initiation	21/04/2016
<a href="#">Sygnis Pharma</a>	Update; Update	27/11/2015; 19/05/2016
<a href="#">SymBio Pharmaceuticals</a>	Update; Update	30/11/2015; 23/03/2016
<a href="#">Tissue Regenix</a>	Outlook; Update	22/01/2016; 22/03/2016
<a href="#">Threshold Pharmaceuticals</a>	Flash; Update	09/12/2015; 11/05/2016
<a href="#">TiGenix</a>	Outlook; Update	28/01/2015; 20/04/2015

<a href="#">Tonix Pharmaceuticals</a>	Outlook; Update	01/04/2016; 25/05/2016
<a href="#">Transgene</a>	Update; Outlook	03/06/2015; 13/04/2016
<a href="#">UDG Healthcare</a>	Update; Update	11/12/2015; 09/02/2016
<a href="#">Vernalis</a>	Flash; Update	28/04/2016; 25/05/2016
<a href="#">Viralytics</a>	Update; Update	05/05/2016; 10/06/2016
<a href="#">VolitionRx</a>	Update; Update	07/01/2016; 01/04/2016

#### Investment companies

<a href="#">BB Biotech AG</a>	Investment trust review	11/03/2015; 09/02/2016
<a href="#">Biotech Growth Trust (The)</a>	Investment trust review	18/02/2015; 15/12/2015
<a href="#">International Biotechnology Trust</a>	Investment trust review	03/03/2015; 11/12/2015
<a href="#">Worldwide Healthcare Trust</a>	Investment trust review	30/09/2014; 23/07/2015

#### QuickViews

To view the following QuickViews see the [healthcare](#) sector profile page on our website.

aap Implantate	24/05/2016
Acucela	30/06/2015
AFT Pharmaceuticals	21/12/2015
Alimera Sciences	20/05/2015
Amplifon	05/05/2015
Anthera Pharmaceuticals	19/04/2016
Ascendis Pharma	18/05/2015
Atossa Genetics	17/11/2015
Avalanche Biotechnologies	22/05/2015
Bone Therapeutics	14/12/2015
Cerulean	10/08/2015
Corium International	19/05/2016
Crossject	17/12/2015
Eaglet	01/04/2016
Epigenomics	15/04/2016
Forward Pharma	02/06/2015
Gentical	01/09/2015
Immunicum	24/07/2015
Imprimis Pharmaceuticals	19/05/2015
Islet Sciences	09/03/2015
Iridex	15/06/2015
LifeWatch	29/01/2016
Lipocine	05/06/2015
MediciNova	01/05/2015
Momenta	27/02/2015
Ocata	17/04/2015
Oryzon Genomics	06/01/2016

Photocure	06/08/2015
Smith & Nephew	07/05/2015
TearLab Corp	14/05/2015
Theraclion	02/11/2015
Titan Pharmaceuticals	23/02/2016
Trimel Pharmaceuticals	20/03/2015
Universal Biosensors	24/08/2015
VolitionRx	15/05/2015
Willex	05/05/2015

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