



Market data	
EPIC/TKR	ABZA
Price (p)	34.0
12m High (p)	65.0
12m Low (p)	31.0
Shares (m)	137.1
Mkt Cap (£m)	46.6
EV (£m)	37.2
Free Float*	29%
Market	AIM

*As defined by AIM Rule 26

Description

Abzena is a UK-based Life Sciences company engaged in the provision of services to enable the discovery and development of better biopharmaceuticals. Embedding its 'know-how' into customers' products is expected to generate a long-term royalty stream.

Company information

CEO John Burt
 CFO Julian Smith
 Chairman Ken Cunningham

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 www.abzena.com

Key shareholders

Directors	2.1%
Invesco	26.4%
Woodford	23.0%
Imperial	19.8%
Ballie Gifford	3.3%

Next event

Jun-17	Finals
Sep-17	AGM

Analysts

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Abzena

Specialist manufacturing opening new doors

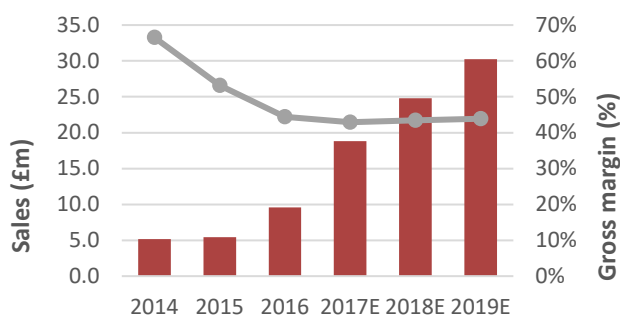
Abzena is an integrated group offering a broad range of services and technologies to improve the chances of discovering and developing effective biopharmaceutical drugs. With strong footprints in both the US and UK, the company provides a fee-for-service offering with the aim of embedding its technology – 'Abzena Inside' – into commercial products, on which it will derive a long-term royalty stream. Abzena's integrated services can now be used from the early stages of drug discovery right through to manufacturing for Phase II clinical trials, making the company an attractive development partner.

- ▶ **Strategy:** Abzena has a dual strategic objective of providing enabling technology on a fee-for-service basis and, wherever possible, to secure technology agreements from embedding its 'know-how' into customers' final commercial products in order to generate a significant long-term royalty stream.
- ▶ **Interims:** Underlying sales from Abzena's service business grew +32% benefitting from an improved and integrated offering. Reported sales growth was boosted by acquisitions and currency (£0.6m). The company had net cash of £9.4m at 30th September which was slightly better than expected.
- ▶ **Valuation:** There are two parts to Abzena's valuation. An EV/sales multiple of 3-4x prospective sales for the service business is justifiable, giving a value range of £56-99m. Adding in the risk-adjusted NPV of the potential royalty stream (£118m) suggests a group value of £177-210m, or 129-153p per share.
- ▶ **Risks:** There are inherent clinical trial and commercialisation risks in drug development. As seen in 1H'17, not all of the 'Abzena Inside' portfolio will reach the market for every indication. But with an expectation of 2-3 'Abzena Inside' products being added each year, the portfolio will be constantly replenished.
- ▶ **Investment summary:** The fast growing service business alone more than justifies the current market capitalisation, suggesting that the market is not recognising the long-term royalty stream. Given that a number of customers are expected to announce clinical trial results on products using 'Abzena Inside' in the next six months, there is considerable scope for the shares to be re-rated in the event of positive outcomes.

Financial summary and valuation						
Year end March (£m)	2014	2015	2016	2017E	2018E	2019E
Sales	5.18	5.41	9.57	18.84	24.80	30.26
R&D investment	-2.60	-2.99	-4.22	-4.26	-4.34	-4.47
Underlying EBIT	-1.14	-5.30	-8.21	-8.44	-7.06	-4.44
Reported EBIT	-1.56	-5.30	-10.90	-8.83	-7.49	-4.91
Underlying PBT	-1.11	-5.22	-7.96	-8.37	-7.07	-4.50
Statutory PBT	-1.53	-5.22	-10.66	-8.75	-7.50	-4.96
Underlying EPS (p)	-4.3	-6.6	-6.4	-5.5	-4.5	-2.6
Statutory EPS (p)	-7.5	-6.6	-8.9	-5.8	-4.8	-3.0
DPS (p)	0.0	0.0	0.0	0.0	0.0	0.0
Net (debt)/cash	2.8	15.8	13.7	2.7	-6.9	-14.6
Capital increase	10.7	19.0	20.0	0.0	0.0	0.0
EV/sales (x)	7.2	6.9	3.9	2.0	1.5	1.2

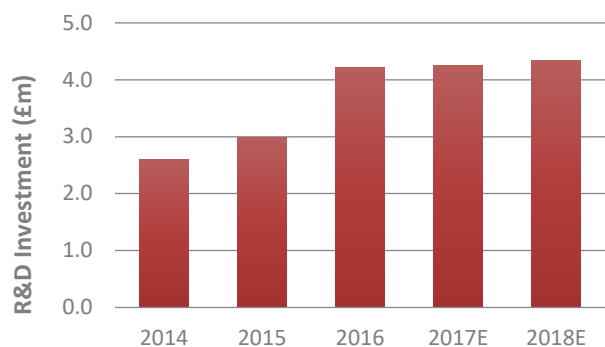
Source: Hardman & Co Life Sciences Research

Revenues & Gross margin



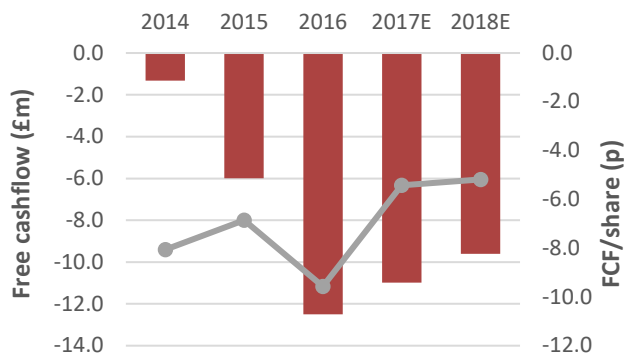
- ▶ Acquisitions have boosted reported sales growth to ca.100% in 2016 and 2017
- ▶ Underlying sales growth rates are closer to +25-30%
- ▶ Gross margins have been lowered by the acquisition of specialty manufacturing businesses
- ▶ Gross margins are forecast to reach a nadir in fiscal 2017 and to rise modestly thereafter

R&D spend



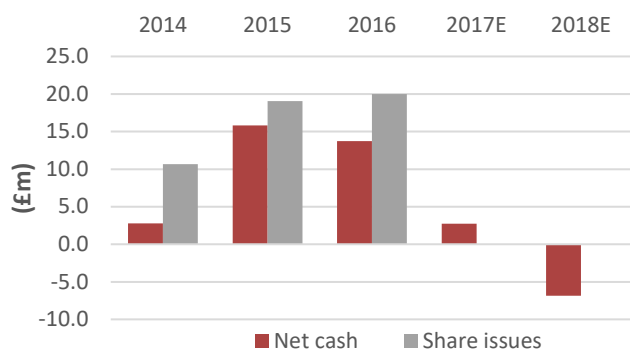
- ▶ Investment in R&D is ca.£4m per annum
- ▶ Focus is on service enhancement and technology development
- ▶ Abzena obtains tax credits on most of its R&D spend
- ▶ All clinical development costs of 'Abzena Inside' products are borne by customers

Free cashflow



- ▶ Trading profit is the key driver of cashflow
- ▶ Strong growth in the business requires a modest annual increase in working capital
- ▶ Some investment in capex will be required in the move to new labs and HQ in the UK and to support manufacturing in the US
- ▶ Forecasts do not allow for future licensing deals, the timing of which is difficult to predict

Net cash/capital increases

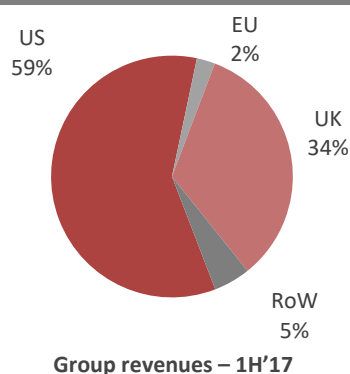


- ▶ At 30th September 2016, Abzena had net cash of £9.4m
- ▶ Based on current forecasts, Abzena has sufficient cash to deliver on strategy through to the early part of fiscal 2018
- ▶ No allowance is made for significant milestones from existing and new licensing agreements
- ▶ Current forecasts suggest that the royalties on 'Abzena Inside' products start in fiscal 2020

Source: Company data; Hardman & Co Life Sciences Research

Interim results summary

Abzena – Geographical analysis



Source: Hardman & Co Life Sciences Research

Over the first six months of fiscal 2017, management has been integrating its US acquisitions and has realigned the enlarged group into three operating divisions that trade under the unified 'Abzena' brand. This has resulted in the expansion of several existing customer relationships and repeat work from major customers', which number about 50% of the top 25 global biopharmaceutical companies. This was evident in the strong underlying – *pro-forma* + constant currency – performance reported in the six months to end September 2016, where service revenues grew +32%

1H'17 sales growth summary

	1H'16 PF	1H'17	CER growth	Reported
Biology	2.73	3.16	+16%	+16%
Chemistry	2.11	3.50	+48%	+66%
Manufacturing	1.24	2.00	+43%	+61%
Total services	6.08	8.65	+32%	+43%
Licensing	0.07	0.31	-	-
Group revenues	6.15	8.96	+36%	+46%

Source: Hardman & Co Life Sciences Research

Key features

- ▶ **Sales:** On a pro forma basis and excluding currency gains, underlying services sales grew +32%, Abzena benefitting from its improved and integrated offering. Including licensing income, total revenues were up +36%
- ▶ **Currency:** With 59% of group sales now invoiced in US\$, the currency benefit in 1H'17 was £0.6m
- ▶ **Gross margin:** Higher material input costs meant that COGS were slightly more than expected giving a gross margin of 40.1% compared to our forecast of 41.2%
- ▶ **SG&A:** The enlarged corporate entity coupled with increased marketing investment, much of which is in US\$, resulted in SG&A costs -£0.7m higher than expected
- ▶ **R&D:** Investment in R&D was in-line with expectations at just under £2.0m
- ▶ **Other income:** Much of the higher marketing costs were offset by higher than anticipated licensing and other income
- ▶ **Net cash:** Higher operating costs and a lower tax credit (£0.24m vs est £0.4m) were offset by improved working capital, such that net cash was in line at £9.4m

Actual vs expectations

Interims to September (£m)	1H'16 actual	1H'17 actual	1H'17 forecast	Delta
Sales	3.50	8.96	8.50	+0.46
COGS	-1.88	-5.18	-5.00	-0.18
SG&A	-3.39	-6.19	-5.50	-0.69
R&D	-1.72	-1.95	-2.00	+0.05
Other income	0.22	0.55	0.20	+0.35
Underlying EBIT	-3.46	-4.13	-3.80	-0.33
Underlying pre-tax	-3.44	-4.08	-3.78	-0.30
Reported pre-tax	-3.94	-4.27	-3.87	-0.30
Underlying EPS (p)	-3.11	-2.80	-2.47	-0.33
Net cash/(debt)	7.42	9.38	9.30	+0.08

Source: Hardman & Co Life Sciences Research

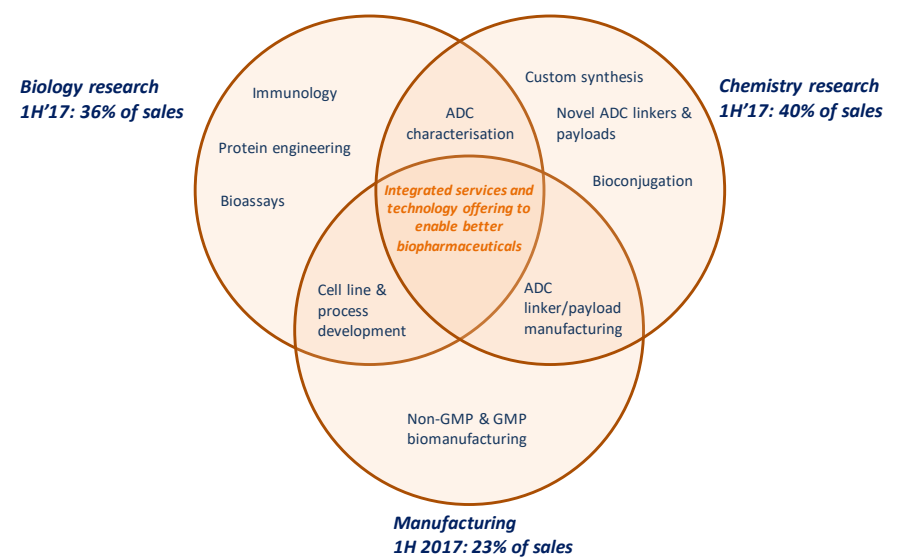
Business update

Integrated and realigned operations...

...trading under a unified Abzena brand...

With its integrated and realigned operations, Abzena offers its existing and potential customers the services and technologies to influence the development of a putative drug at every stage of the process, which is an important factor taken into consideration by potential partners. Abzena services can now be used in the early stages of drug discovery right through to manufacturing for Phase II clinical trials, making the company an attractive development partner. The group is more balanced today in terms of revenue streams and this is expected to be even more evident when full year results are announced, when the acquisitions will have been trading within the group for a full year.

Abzena's integrated services & technology offering



Source: Abzena

Cross-selling opportunities

...provide significant cross-selling opportunities

The benefits of this integrated services model were clearly evident in the first half results with many existing customers expanding their activities through multiple or repeat projects with the group.

Customer adoption of cross-selling opportunities – 1H'17													
	A	B	C	D	E	F	G	H	I	J	K	L	M
ABZENA Inside						*	*				*	*	*
Biology	●		●	●	●	●	●	●	●	●	●	●	
Chemistry		●	●				●	●	●	●			
Manufacturing	●	●		●							●	●	●

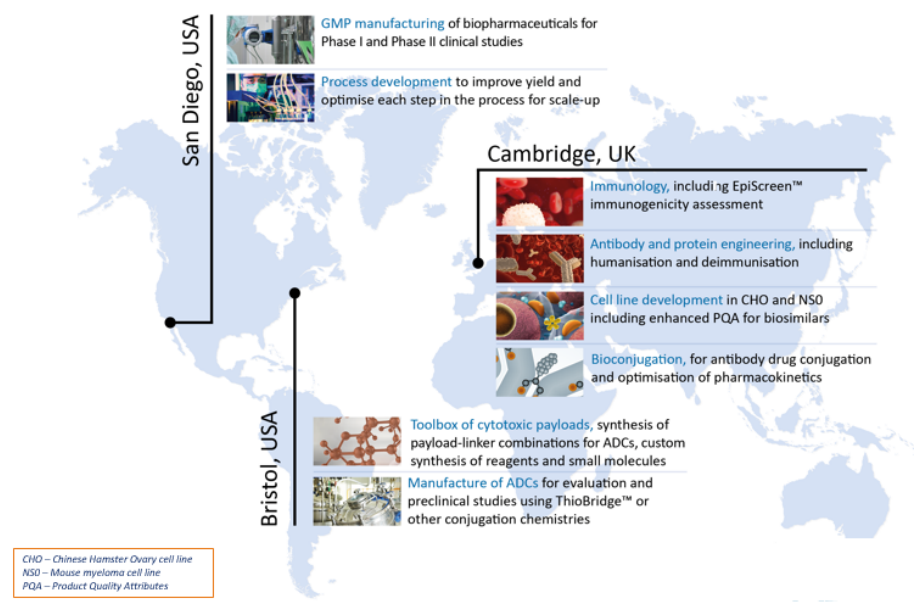
¹Previous 'Abzena Inside' customer

²Utilising both immunology & protein engineering services

Source: Abzena

International operations

Abzena – International operations



Source: Abzena

Biology research

- ▶ 36% of service revenues
- ▶ Underlying sales growth in 1H'17: +16%
- ▶ Expanding international customer base: 7 clients from top 25 biopharmaceutical companies
- ▶ Mixed fortunes for 'Abzena Inside' development products – Nine 'Abzena Inside' composite human antibody projects ongoing during the period

During 1H'17...

62 immunology projects for 37 customers...

...and 28 protein engineering projects for 16 customers...

...invoiced in GBP, so no currency influence

Abzena has, and continues to, work with a large number of research organisations and biopharmaceutical companies in relation to antibody-derived drug discovery, given that there are high expectations within the pharmaceutical industry that the global market will continue to be dominated by biopharmaceuticals. During the period, Abzena undertook work for a significant number of the global biopharmaceutical majors, applying its technology to 62 immunology projects for 37 customers and 28 protein engineering projects for 16 customers. We believe that most of this work is performed in the UK and invoiced in sterling, therefore there is little difference between CER and reported growth rates.

Biology research – Sales analysis				
Interims to Sept (£m)	1H'16	1H'17	CER growth	Reported
Immunology	2.04	2.38	+17%	+17%
Protein engineering	0.69	0.77	+12%	+12%
Biology research	2.73	3.16	+16%	+16%

Source: Company reports; Hardman & Co Life Sciences Research

'Abzena Inside'

Nine 'Abzena Inside' composite human antibody projects ongoing during the period

The core strategy of Abzena is to retain a potential long-term interest in the commercialisation of products that have benefited from its 'know-how', through milestones and royalties. 'Abzena Inside' is a term used to describe the application of the group's proprietary technologies which brings potential licence fees, milestone payments and/or royalties. The aim is to have 2-3 'Abzena Inside' products to enter clinical development each year.

Mixed clinic trial outcomes...

11 products in clinical development

Mixed results have been seen during the first half of 2017. On the one hand encouraging results have been reported by Opsona and True North Therapeutics, offsetting decisions by Gilead Sciences not to pursue GS-5475 for ulcerative colitis and Crohn's disease, and to discontinue the development of simtuzumab.

...but 11 'Abzena Inside' products still remain in clinical trials

However, It should be noted that Gilead is still developing GS-5475 for a number of other indications. In the normal course of clinical development such events are only to be expected. Overall, there are currently 11 'Abzena Inside' products in clinical trials.

Current 'Abzena Inside' portfolio				
Company & product candidate	Potential indications	Phase I	Phase II	Phase III
Gilead Sciences – GS-5745	Gastric cancer, RA, cystic fibrosis	██████████	██████████	██████████
Opsona Therapeutics – OPN-305	DGF & myelodysplastic syndrome	██████████	██████████	
Vascular Pharmaceuticals – VPI-2690B	Diabetic nephropathy	██████████	██████████	
True North Therapeutics – TNT009	Cold agglutinin disease & antibody-driven diseases	██████████		
Roche – RG 6125	RA, fibrotic conditions, cancer	██████████		
NKT Therapeutics – NKTT120	Sickle cell disease	██████████		
Therapure Innovations – TBI 304H	Chemotherapy-induced anaemia	██████████		
4 Undisclosed companies	Undisclosed	██████████		

RA = rheumatoid arthritis; DGF = delayed graft function
Source: Abzena

Positive results on OPN-305 reported at ASH

Opsona Therapeutics

Opsona is developing OPN-305, a first-in-class fully humanised antibody to reduce pro-inflammatory cytokine production associated with heart and kidney diseases, to lower the risk of myelodysplastic syndrome, for which the company has received Orphan Drug designation in the US. Encouraging preliminary results from a Phase I/II were reported at the recent American Society of Haematology (ASH) meeting.

True North progressing with TNT009, its 'Abzena Inside' product...

True North Therapeutics

True North has received Orphan Drug Designation for its TNT009 antibody for autoimmune haemolytic anaemia, which is moving towards a pivotal trial. At the same ASH meeting, TNT published encouraging findings from two studies with TNT009. TNT009 has been shown previously to induce a rapid correction of haemolytic anaemia in severe Cold Agglutinin Disease (CAD) patients in a Phase Ib trial. At ASH, TNT further reported that subsequent washout of TNT009 led to relapse in all patients, and that re-induction of remission by TNT009 was possible in all patients. Investigators concluded that long-term maintenance of remission could be achieved using 60 mg/kg bi-weekly dosing with TNT009. This dosage regimen will be used in larger-scale clinical trials for CAD.

...with positive results reported at ASH

Risk adjusted royalty stream has fallen due to discontinued products

Overall, our risk-adjusted DCF for the 'Abzena Inside' portfolio has changed by -12p to 86p per share as a result of these changes within the portfolio.

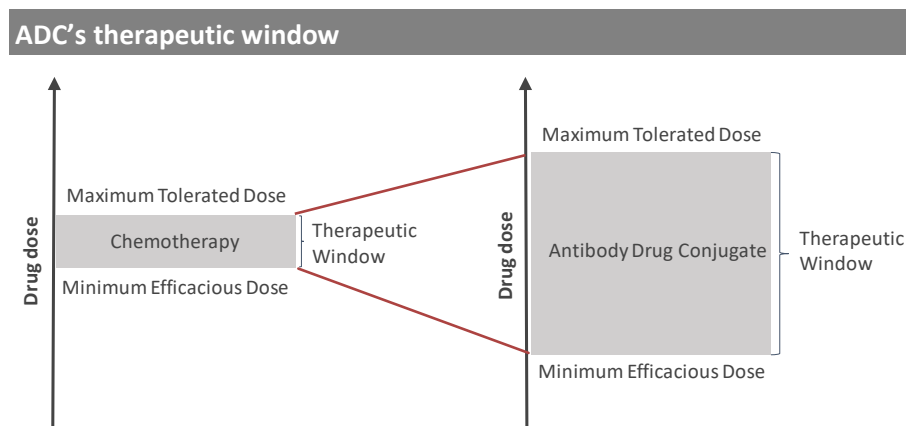
Chemistry research

- ▶ 40% of service revenues
- ▶ Underlying sales growth in 1H'17: +48%
- ▶ Over 50% of customers have pursued programmes related to Abzena's proprietary technologies
- ▶ Expanding capacity through investment in several new scientists each requiring an additional investment in associated equipment

The Chemistry division complements both of Abzena's other business areas. It is comprised of a bioconjugation service which couples drugs to antibodies, and chemistry services for the custom synthesis of complex molecules including antibody drug conjugate (ADC) linkers and payloads from laboratory scale (mg) to clinical-scale (kg) quantities.

ADCs significantly improve the therapeutic window

Chemotherapy is an important component of most cancer treatment regimens and within this broad category cytotoxic drugs, which kill cells by preventing them from dividing, play a key role. However, by their very nature, they are limited by a narrow therapeutic window and lack of specificity. The concept of ADCs is to combine the specific cancer killing ability of cytotoxic drugs with unique targeting capabilities of monoclonal antibodies (mAb) for cancerous cells. ADCs significantly improve the discrete sensitivity between healthy and diseased cells, greatly improving the therapeutic window.



Source: Abzena; Hardman & Co Life Sciences Research

Simple in theory...

...but a complex process requiring specialist knowledge

Investment in new scientists and associated equipment to expand capacity

While this concept sounds simple, the actual process of making ADCs is complex and requires specialist knowledge. Therefore, most of the pharmaceutical industry outsources its needs in this field. Abzena now has this specialist knowledge and capability following its transformative acquisition of The Chemistry Research Solution in December 2016. On a like-for-like basis, this business has grown +48% in the first half of fiscal 2017 and, with increased investment being made, strong growth is expected to continue well into the future.

Investment in chemistry research takes several forms. At present, the main investment is in new scientists in order to expand capacity. However, each of them requires an additional capital investment in appropriate associated equipment. Abzena is aiming to take on several new scientists during 2017. From an R&D perspective, Abzena is also continuing to invest in payload linker technology for ADCs.

Halozyme Therapeutics partnership

In January 2016, Abzena signed a licensing agreement with Halozyme Therapeutics to give it access to the ThioBridge technology for use in its ADC programme. Halozyme has an anti-EGFR (Epidermal growth factor receptor) therapeutic, but these have been shown to have certain limitations – dose-limiting skin rash and downstream mutations. Therefore, Halozyme is investigating the use of ADC technology to overcome these limitations.

HTI-1511 uses Abzena's linker technology

Halozyme presented pre-clinical data on HTI-1511 at the American Academy for Cancer Research (AACR) in April 2016. HTI-1511 was engineered to bind to EGFR at the low pH of the tumour microenvironment while decreasing or attenuating the binding at the neutral pH of skin. Abzena has provided the linker technology for this product. Results showed that HTI-1511 had an acceptable safety profile. Consequently, Halozyme has initiated a range of studies to prepare for an IND filing for HTI-1511 with the aim of initiating clinical trials in 2018.

Abzena will receive further license fees and milestones as HTA-1511 progresses, as well as royalties on future sales.

Manufacturing

- ▶ 23% of service revenues
- ▶ Underlying sales growth in 1H'17: +43%
- ▶ Attractive offering – supplying product all the way through the development cycle, from initial cell line development, through process optimisation and into contract manufacturing
- ▶ Ongoing capacity expansion and process development programme, with opportunities also to upgrade the GMP manufacturing platform

Big demand for specialist manufacturers with expert skillset

Extending its specialist manufacturing capability is increasingly attractive to the pharmaceutical industry and this was again evident in the interim results. During the first half of fiscal 2017, revenues from Abzena's historical core cell line development more than doubled to £0.6m, and exceeded the sales for the whole of the last financial year. On an underlying basis, growth in cell line development was estimated to be +85% and Abzena's San Diego GMP manufacturing operations grew +31% on an underlying *pro forma* basis

Manufacturing – Sales analysis				
Interims to Sept (£m)	1H'16 PF	1H'17	CER growth	Reported
Cell line development	0.27	0.57	+85%	+110%
GMP manufacturing	0.97	1.43	+31%	+47%
Manufacturing	1.24	2.00	+43%	+61%

Source: Company reports; Hardman & Co Life Sciences Research

Manufacturing investments

The benefit of being able to supply product all the way through the development cycle, from initial cell line development, through process optimisation and into contract manufacturing for trials, was evident in the first half. Abzena is continuing to invest in its manufacturing business to expand capacity and take advantage of opportunities to accelerate growth. Process development aims to improve yields and optimise each step in the manufacturing process in readiness for scale-up.

Capacity expansion to take advantage of opportunities to accelerate growth

The GMP manufacturing facility in San Diego can produce sufficient quantities of product to satisfy customers' needs in pre-clinical, Phase I and Phase II trials. In 1H'17, Abzena has invested in Product Quality Attribute (PQA) analytics to enhance its biosimilar offering.

Investigating all finance options to fund growth opportunities

Management is looking at all options available to fund an acceleration in Abzena's manufacturing investment programme, as evidenced by the use of £0.5m of vendor financing during the first half of the year to expand capacity in San Diego.

Change in valuation

- ▶ No material changes have been made to our forecasts to the three operating divisions
- ▶ Following disappointing results from Phase II/III clinical trials, Gilead dropped simtuzumab for non-alcoholic steatohepatitis (NASH) and GS-5745 in ulcerative colitis & Crohn's disease
- ▶ Encouraging results from Opsona (OPN-305) and True North Therapeutics (TNT009), but too early to adjust risk probability

'Abzena Inside'

Discontinuation of two 'Abzena Inside' products clearly impacts the risk-adjusted NPV...

...to 86p per share

Full details of our 'Abzena Inside' analysis and valuation methodology were provided in our report published 13th September 2016 – *Servicing the royalty stream*. Based on our sales assumptions, a royalty rate of 1% and the previously published probabilities for a biopharmaceutical drug reaching the market, the risk-adjusted NPV of Abzena's royalty stream has been reduced to \$191m/£147m from \$230m/£174m. Applying a conservative (Abzena may also benefit from lower patent box tax rate) long-term tax rate of 20%, this equates to post-tax income of \$153m/£118m, or \$1.12/86p per share.

Abzena royalty summary

Pre-tax NPV (\$m)	\$191m
Pre-tax NPV (£m)	£147m
Tax rate	20%
Post-tax NPV (\$m)	\$153m
Post-tax NPV (£m)	£118m
Shares in issue	137m
NPV/share (\$)	\$1.12
NPV/share (£)	£0.86

Source: Hardman & Co Life Sciences Research

The service businesses alone can more than justify the current market cap...

...suggesting that the royalty stream is being ignored totally

Service business valuation

Given the growth rate compared to a number of peers, an EV/sales of 3.0-4.0x for Abzena's service business is easily justified. Applying this to fiscal 2017 and 2018 forecasts implies an EV of £57-£99m, compared to a current market capitalisation of £47m, suggesting that this part of the business deserves to be re-rated. Moreover, the large potential royalty stream is in the share price for nothing. Whilst clinical trial results will not always result in positive outcomes, the risk is clearly being overdone. Therefore, we would expect strong valuation uplift on any positive newsflow to emerge on clinical trial results from partners using 'Abzena Inside'.

Summary group valuation

Year end March (£m)	----- 2017E -----		----- 2018E -----	
EV/sales	3.0x	4.0x	3.0x	4.0x
Service sales forecast	18.8	18.8	24.8	24.8
Implied EV	56.5	75.4	74.4	99.2
Net cash	2.7	2.7	-6.9	-6.9
NPV of royalty stream (page 12)	117.6	117.6	117.6	117.6
Group market capitalisation	176.9	195.7	185.2	210.0
Shares in issue (m)	137.1	137.1	137.1	137.1
Valuation/share (p)	129	143	135	153

Source: Hardman & Co Life Sciences Research

Financials

Profit & Loss

- ▶ **Sales** – Only revenues from the operational side of the business is included in our sales forecast
- ▶ **Costs** – All costs are considered in relation to sales derived from the service businesses. Licensing/milestones/royalties together with grant funding are shown separately. Following 1H numbers, we have increased our SG&A forecast for 2017 by –£1.0m to –£13.3m to reflect the increased personnel investment in the US. No meaningful changes have been made to COGS or R&D
- ▶ **Forex** – Weak sterling has benefited our sales forecast for 2017 by £2.0m (underlying sales forecast £17.2m). However, this does not all drop through to the bottom line, because an estimated 60% of costs are also overseas

Profit & Loss account						
Year end March (£m)	2014	2015	2016	2017E	2018E	2019E
Key currency GBP:USD	1.59	1.61	1.51	1.30	1.30	1.30
Service sales	5.18	5.41	9.57	18.84	24.80	30.26
COGS	-1.74	-2.53	-5.32	-10.75	-14.03	-16.97
Gross profit	3.45	2.88	4.25	8.08	10.77	13.29
Gross margin	66.5%	53.2%	44.4%	42.9%	43.4%	43.9%
SG&A	-2.19	-5.63	-8.89	-13.27	-14.99	-15.26
R&D	-2.60	-2.99	-4.22	-4.26	-4.34	-4.47
EBITDA	-0.55	-4.51	-6.82	-6.36	-5.00	-2.40
Depreciation/Amort.	-0.58	-0.79	-1.39	-2.08	-2.06	-2.04
Licensing/royalties	0.08	0.26	0.29	0.50	1.00	1.50
Other income	0.13	0.19	0.37	0.50	0.50	0.50
Underlying EBIT	-1.14	-5.30	-8.21	-8.44	-7.06	-4.44
Share based costs	0.00	0.00	-0.16	-0.39	-0.42	-0.47
Exceptionals	-0.43	0.00	-2.54	0.00	0.00	0.00
Statutory EBIT	-1.56	-5.30	-10.90	-8.83	-7.49	-4.91
Net financials	0.03	0.08	0.24	0.07	-0.01	-0.05
Pre-tax profit	-1.11	-5.22	-7.96	-8.37	-7.07	-4.50
Extraordinary items	0.00	0.00	0.00	0.00	0.00	0.00
Reported pre-tax	-1.53	-5.22	-10.66	-8.75	-7.50	-4.96
Tax payable/credit	0.55	0.50	0.96	0.85	0.87	0.89
Tax rate	36%	10%	9%	10%	12%	18%
Underlying net income	-0.56	-4.72	-7.00	-7.52	-6.20	-3.60
Statutory net income	-0.99	-4.72	-9.70	-7.90	-6.63	-4.07
Ordinary shares:						
Period-end (m)	13.15	97.47	136.2	137.1	137.1	137.1
Weighted average (m)	13.15	71.62	109.4	136.9	137.1	137.1
Fully diluted (m)	15.24	79.07	117.2	144.7	145.0	145.0
Underlying Basic EPS (p)	-4.3	-6.6	-6.4	-5.5	-4.5	-2.6
Statutory Basic EPS (p)	-7.5	-6.6	-8.9	-5.8	-4.8	-3.0
U/I Fully-diluted EPS (p)	-3.7	-6.0	-6.0	-5.2	-4.3	-2.5
Stat. Fully-diluted EPS (p)	-6.5	-6.0	-8.3	-5.5	-4.6	-2.8
DPS (p)	0.0	0.0	0.0	0.0	0.0	0.0

Source: Hardman & Co Life Sciences Research

Balance sheet

- ▶ **Investment** – Our forecasts assume that management continues to invest into its service and technology offering, including immunology and ADC technologies in particular, at an appropriate level to increase the likelihood of signing more ‘Abzena Inside’ deals
- ▶ **Cash position** – At the end September 2016 the company had net cash of £9.4m on its balance sheet. Based on cashflow forecasts (see next page) the company will move to a net debt position by the end of fiscal 2018 in the absence of further licensing deals
- ▶ **Payables/receivables** – Although the business is growing which would suggest increases in working capital, no meaningful changes were observed in 1H’17. The main influence is the timing of tax credits on R&D expenditure from the UK government
- ▶ **Debtor/creditors days** – There has been a modest improvement in the run rate for trade debtors to approximately 60 days, while that of trade payables is expected to improve towards 75 days, based on the interim balance sheet

Balance sheet						
@31 st March (£m)	2014	2015	2016	2017E	2018E	2019E
Shareholders' funds	13.53	27.85	41.06	33.15	26.53	22.46
Cumulated goodwill	2.03	2.03	15.06	15.06	15.06	15.06
Total equity	15.57	29.88	56.12	48.21	41.59	37.52
Share capital	0.01	0.20	0.27	0.27	0.27	0.27
Reserves	13.52	27.65	40.78	32.88	26.25	22.18
Provisions/liabilities	0.12	0.00	0.00	0.00	0.00	0.00
Deferred tax	1.18	1.15	2.03	2.03	2.03	2.03
Long-term loans	0.00	0.00	0.00	0.00	0.00	0.00
Short-term debt	0.00	0.00	0.00	0.00	0.00	0.00
less: Cash	2.76	15.80	13.72	2.74	-6.86	-14.60
Invested capital	12.08	13.20	29.36	32.45	35.42	39.09
Fixed assets	0.69	1.49	4.17	6.53	7.84	9.05
Intangible assets	7.41	6.91	8.12	7.24	6.35	5.47
Inventories	0.30	0.82	1.38	2.71	3.57	4.36
Trade debtors	0.94	1.23	2.14	4.21	4.54	5.04
Other debtors	1.33	1.93	3.30	3.36	3.42	3.48
Tax liability/credit	0.54	1.15	1.57	0.96	0.85	0.87
Trade creditors	-0.40	-0.83	-1.95	-2.45	-2.70	-3.26
Other creditors	-0.76	-1.52	-3.54	-5.17	-4.41	-4.59
Debtors less creditors	1.64	1.95	1.52	0.91	1.71	1.54
Invested capital	12.08	13.20	29.36	32.45	35.42	39.09

Source: Hardman & Co Life Sciences Research

Key metrics						
@31 st March (£m)	2014	2015	2016	2017E	2018E	2019E
Net cash/(debt)	2.76	15.80	13.72	2.74	-6.86	-14.60
Stock days	31	80	75	69	82	85
Debtor days	33	73	64	61	64	58
Creditor days	70	89	96	75	67	64

Source: Hardman & Co Life Sciences Research

Cashflow

Key drivers of the cashflow are the trading profit/loss from the P&L account, an increase in working capital requirements reflecting the growth of the business and the capital expenditure.

- ▶ **Trading profit** – Over the forecast period reducing losses are expected as the integrated business is driven by the sales growth
- ▶ **Working capital** – The main cost within the business is personnel. Materials and consumables used to supply its services are relatively cheap. We would expect working capital to rise in-line with the growth of the business
- ▶ **Capital expenditure** – The move into a new HQ adjacent to its existing building at Babraham, UK has been delayed slightly. Although leased, there will be some equipment capex for the new and enlarged laboratory facilities. Investment is continuing at its US operations in both Bristol and San Diego
- ▶ **Cashburn** – Currently in the order of £10m per annum. Our forecasts suggest that Abzena will move from a net cash position to net debt by the end of fiscal 2018, notwithstanding that forecasts do not allow for any new licensing deals for 'Abzena Inside'

Cashflow						
Year end March (£m)	2014	2015	2016	2017E	2018E	2019E
Trading profit	-1.14	-5.30	-8.21	-8.44	-7.06	-4.44
Depreciation	0.28	0.29	0.80	1.20	1.18	1.15
Amortisation	0.30	0.50	0.59	0.88	0.88	0.88
Inventories	-0.11	-0.52	-0.56	-0.55	-0.74	-0.91
Working capital	-0.80	0.29	-2.32	-2.11	-2.32	-2.85
Exceptionals/provisions	0.12	-0.12	-1.17	0.00	0.00	0.00
Disposal profit/loss	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00
Company cashflow	-1.34	-4.86	-10.87	-9.02	-8.06	-6.17
Net interest	0.03	0.08	0.03	0.02	-0.01	-0.05
Tax paid/received	0.25	-0.13	0.37	1.57	0.96	0.85
Operational cashflow	-1.06	-4.91	-10.47	-7.43	-7.11	-5.37
Capital expenditure	-0.28	-1.08	-2.03	-3.56	-2.49	-2.37
Sale of fixed assets	0.01	0.00	0.00	0.00	0.00	0.00
Free cashflow	-1.33	-6.00	-12.50	-10.99	-9.60	-7.74
Dividends	0.00	0.00	0.00	0.00	0.00	0.00
Acquisitions	-6.13	0.00	-9.37	0.00	0.00	0.00
Disposals	0.00	0.00	0.00	0.00	0.00	0.00
Other investments	0.00	0.00	0.00	0.00	0.00	0.00
Cashflow after invest.	-7.46	-6.00	-21.87	-10.99	-9.60	-7.74
Share repurchases	0.00	0.00	0.00	0.00	0.00	0.00
Share issues	10.67	19.04	20.01	0.00	0.00	0.00
Currency effect	0.00	0.00	0.00	0.00	0.00	0.00
Borrowings acquired	0.09	0.00	-0.22	0.00	0.00	0.00
Change in net debt	3.30	13.04	-2.08	-10.99	-9.60	-7.74
Hardman FCF/share (p)	-8.07	-6.86	-9.57	-5.43	-5.18	-3.92
Opening net cash	-0.58	2.72	15.76	13.69	2.70	-6.90
Closing net cash	2.72	15.76	13.69	2.70	-6.90	-14.64

Source: Hardman & Co Life Sciences Research

Notes

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