

## Market data

EPIC/TKR	COS
Price (p)	5.00
12m High (p)	14.75
12m Low (p)	5.00
Shares (m)	179.6
Mkt Cap (£m)	9.0
EV (£m)	7.7
Free Float*	76%
Market	AIM

\*As defined by AIM Rule 26

## Description

COS develops, manufactures and supplies medical grade collagen biomaterials, tissues and devices. Its products are used in research, *in vitro* diagnostics, medical devices and regenerative medicine. The company provides R&D and contract services to a global and diverse customer base.

## Company information

CEO	Jamal Rushdy
CFO	Gill Black
CSO	Stewart White
Chairman	David Evans
	+44 141 648 9100
	www.collagensolutions.co.uk

## Key shareholders

Directors + management	26.0%
Helium Rising Stars	7.6%
Northern Venture Trust	7.4%
Calculus Capital	6.3%
Legal & General	5.8%

## Next event

Jly-17	Finals
Aug-17	AGM

## Analysts

Martin Hall	020 7148 1433	mh@hardmanandco.com
Dorothea Hill	020 7148 1433	dnh@hardmanandco.com
Gregoire Pave	020 7148 1434	gp@hardmanandco.com

## Collagen Solutions

### Interims: Foundations laid for strategic growth

Collagen Solutions is a biomaterials company developing and manufacturing medical grade collagen components for use in medical devices, *in vitro* diagnostics, and regenerative medicine. New leadership has introduced a number of initiatives and is investing in global commercial infrastructure to build on its strong base business and to execute on a scalable growth strategy. Interim results confirm that the realigned strategy is starting to come through. Meanwhile, investment continues to be made in establishing a pipeline of finished devices - with three projects initiated currently – that will add incremental value to the business.

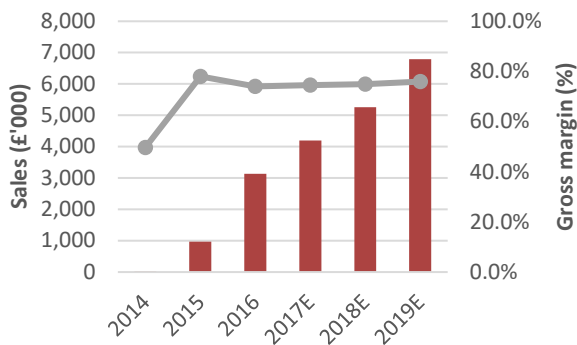
- ▶ **Strategy:** Under new leadership, strategy has been re-focused and multiple initiatives introduced to increase the growth opportunities. The strategy to move COS from a reliable collagen supplier to one that also has proprietary products will move it into profitability and cash generative at a faster pace.
- ▶ **Interims:** Results confirm that COS is moving in the right direction with underlying sales growth of 12-13%, and is starting to benefit from investment in commercial infrastructure, a unified brand, and opportunities for cross-selling. Weakness of sterling benefited reported sales but also affects the cost base.
- ▶ **Forecasts:** No material changes have been made to forecasts from an operational standpoint. However, the company has been awarded some grants recently which benefit the other income line and move the company into an EBITDA positive position in fiscal 2019.
- ▶ **Risks:** Management has stated a new aspirational, but achievable, target to grow sales five-fold within five years. This equates to a demanding CAGR for sales of ca.50%. Key will be the time it takes to get CE Mark again for ChondroMimetic, which has been reaffirmed for the middle of 2017.
- ▶ **Investment summary:** Evidence that the realigned strategy onto an accelerated growth platform, whilst maintaining core objectives, is starting to bear fruit. Investment in new opportunities (China JV and Orthomimetics) continues to build a pipeline of strategic relationships that should drive long term growth, whilst delivering short term financial objectives.

## Financial summary and valuation

Year end March (£000)	2014	2015	2016	2017E	2018E	2019E
Sales	24	973	3,130	4,110	5,170	6,720
Underlying EBITDA	-364	-663	-374	-601	73	777
Underlying EBIT	-381	-793	-721	-1,048	-454	231
Underlying PBT	-381	-920	-983	-1,172	-682	28
Statutory PBT	-480	-1,102	-866	-1,222	-732	-22
Underlying EPS (p)	-0.87	-0.98	-0.64	-0.77	-0.49	-0.11
Statutory EPS (p)	-1.10	-1.17	-0.57	-0.80	-0.51	-0.14
Net (debt)/cash	1,492	3,282	2,384	1,366	-284	-1,277
Capital increase	3,374	5,422	207	1,027	1,000	0
P/E (x)	-5.7	-5.1	-7.8	-6.5	-10.3	-44.0
EV/sales (x)	-	6.4	2.0	1.5	1.2	0.9
EV/EBITDA (x)	-	-	-	-	-	8.0

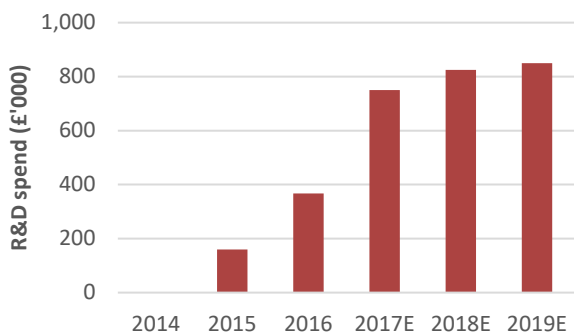
Source: Hardman & Co Life Sciences Research

### Sales & Gross margin



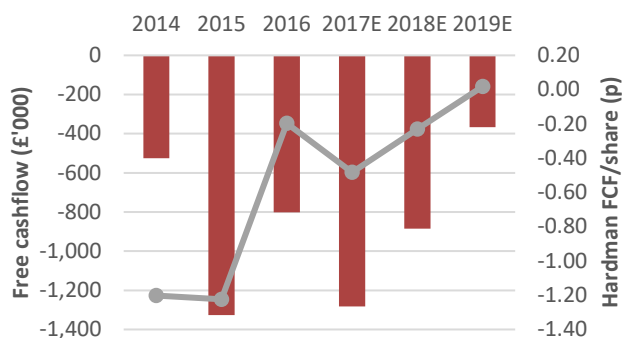
- ▶ Sales are expected to grow substantially as customers receive regulatory approvals
- ▶ Numerous new opportunities, but timing of their contribution is complex and, therefore, not included in our conservative forecasts
- ▶ The gross margin is dependent on the mix of business – contract manufacturing commands lower margins
- ▶ Gross margin is stable, but is likely to go higher as COS moves up the value chain

### R&D spend



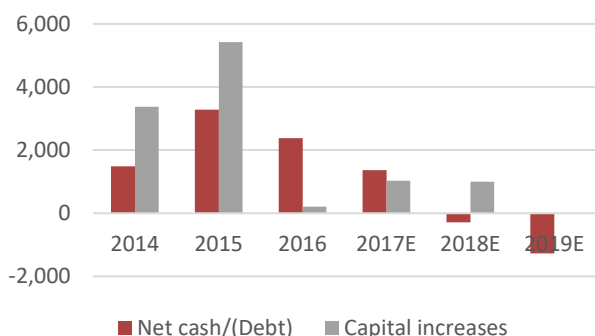
- ▶ COS currently invests about 12% of sales into R&D, but this is modest in absolute terms
- ▶ Investment in R&D spend will rise substantially in order to deliver the strategy of developing 'owned products'
- ▶ COS adds value through development of customer formulations
- ▶ Internal development is capable of supporting some investment R&D

### Free cashflow



- ▶ Accelerated spend on R&D, China JV and increasing the commercial team to drive medium to long term revenues affects short term cash flow
- ▶ Uncommitted cap-ex investment could be delayed to preserve cash
- ▶ Forecasts are conservatively based with future changes more likely to be upwards with resulting improvement in cashflows
- ▶ Cash position is affected by deferred consideration in 2018 and 2019

### Net cash

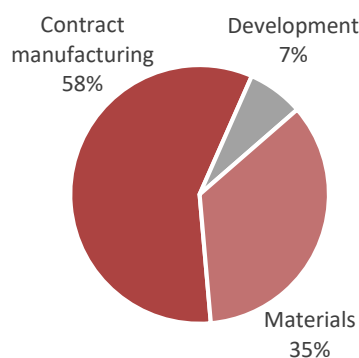


- ▶ Accelerated R&D and marketing spend is utilising cash that would otherwise be used for deferred considerations
- ▶ Deferred considerations – Southern Lights and CS (US) – will push net cash into a net debt position from 2018
- ▶ Capital increases in 2017 & 2018 currently reflect deferred consideration for acquisition in shares
- ▶ Speed of development of ChondroMimetic programme will determine the timing/need for more cash

Source: Company data; Hardman & Co Life Sciences Research

## Interim results

### Business unit sales analysis



1H'17: £1.83m

Source: Collagen Solutions

Collagen Solutions develops and manufactures medical grade collagen components for use in regenerative medicine and diagnostics. Its core business is development, supply and manufacturing of biomaterials on contract, however, in May 2016 the company announced a refocusing of its growth strategy, including increased investment towards proprietary finished devices.

The six months to September 2016 (1H'17) represents the first reporting period for which this strategy has been in place. All reporting segments reported growth, but the lead was from the biomaterials contracts business, which was reflected in the underlying sales growth (+12-13%). Management has outlined an ambitious, but achievable, sales target of 5x growth for within the next five years; whilst an admirable goal, this does equate to a demanding CAGR of ca.50% over this period.

### Key features

- ▶ **Product sales:** Slightly lower than our forecast, with underlying sales growth of +12-13% to £1.83m (£1.44m); sales were also boosted at the reported level by just over £0.2m from the weakness of sterling
- ▶ **Other revenues:** Part of the reason for the weaker than expected sales growth was that the 12+ month sales cycles have not yet completed in the US and Asia Pacific from the new sales hires in these regions
- ▶ **Gross margins:** The gross margin is very dependent on the mix of business and fell from 75.7% in 1H'16 to 71.3% in 1H'17, compared to our forecast of 71.0%
- ▶ **Administration:** Investment in senior management was reflected in the rise in admin costs, which were also impacted at the reported level by currency. Overall, the costs were about £0.1m higher than forecast at -£1.12m (-£0.77m)
- ▶ **R&D:** Management has made a conscious decision to invest more in R&D to bring forward a number of value added products to retain more of the margin longer-term. R&D was raised +119% to -£0.27m (-£0.12m).
- ▶ **Net cash:** The slightly higher operating loss was offset by improvements in working capital, such that the net cash position at the end of the period was £1.25m (cash £1.66m; loans -£0.41m) compared to our forecast of £1.27m

### 1H'17 actual vs expectations

Interims to September (£000)	1H'16 actual	1H'17 actual	1H'17 forecast	Delta
Product Sales	1,442	1,831	1,910	-79
COGS	-351	-526	-554	+28
Marketing	-266	-363	-350	-13
SG&A	-773	-1,122	-1,025	-97
R&D	-125	-274	-320	+46
Other income	18	60	0	+60
<b>EBITDA</b>	<b>-55</b>	<b>-393</b>	<b>-339</b>	<b>-54</b>
D&A	-156	-206	-200	-6
<b>Underlying EBIT</b>	<b>-211</b>	<b>-600</b>	<b>-539</b>	<b>-61</b>
Underlying PBT	-332	-664	-600	-64
Reported Pre-tax	-356	-983		
<b>Underlying EPS (p)</b>	<b>-0.25</b>	<b>-0.42</b>	<b>-0.39</b>	
Net cash/(debt)	3,022	1,246	1,270	-24

Source: Hardman & Co Life Sciences Research

### Other items

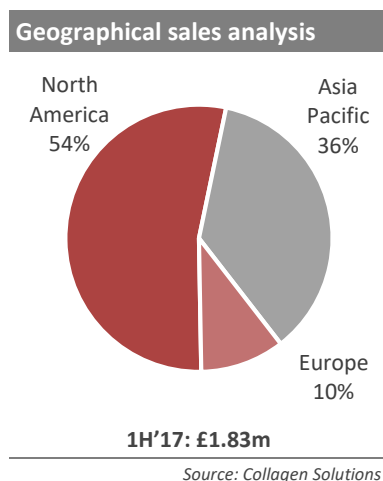
- ▶ **Strengthened commercial team:** Four new senior hires in sales and marketing, developing direct sales channels in these territories in anticipation of the launch of, amongst others, proprietary ChondroMimetic finished devices
- ▶ **Growing management team:** Appointment of a general manager for the New Zealand office, further strengthening COS' Asia Pacific presence
- ▶ **Expansion in East Asia and US:** Offices for sales and marketing were opened in Seoul and Minneapolis; progress is being made in distribution channels in China; distribution agreements were reached for research markets in US, UK, South Korea and Japan
- ▶ **Global branding launch:** New website introduced
- ▶ **Finished device projects:** On track for ChondroMimetic CE mark in mid-2017 with launch supported by a 6-year retrospective analysis of patient implants; promising results presented for wound care R&D
- ▶ **Grants:** EU Horizon 2020 grant invitation for tissue regeneration research programme

### Geographical sales analysis

The company provided a breakdown in sales by geography at the interim stage for the first time, although this information has been available at the full year previously. This is important information given the weakness in sterling, which looks set to persist for some time.

Growth rates were somewhat different to those forecast. First, given the investment that has been made in marketing, we were expecting to see quite strong growth from North America. However, based on the numbers provided, the local growth rate was just +3%. This was also the case in SE Asia, where local growth in 1H'17 was around +2%. In contrast, COS has had exceptional performance in Europe, where sales in 1H'17 were higher than for all of 2016.

This partly reflects the delayed feedback of around 12+ months following recruitment of sales hires that was completed only in August. The first hire in Europe was in January 2016, which has clearly benefited the European results in 1H'17. In contrast, the hires in Asia Pacific and the US were completed in May and August respectively, which was too early in the sales cycle to have had an effect on these results. In addition, sometimes US customers have products delivered to subsidiaries based in Europe.



### Half-yearly geographical breakdown

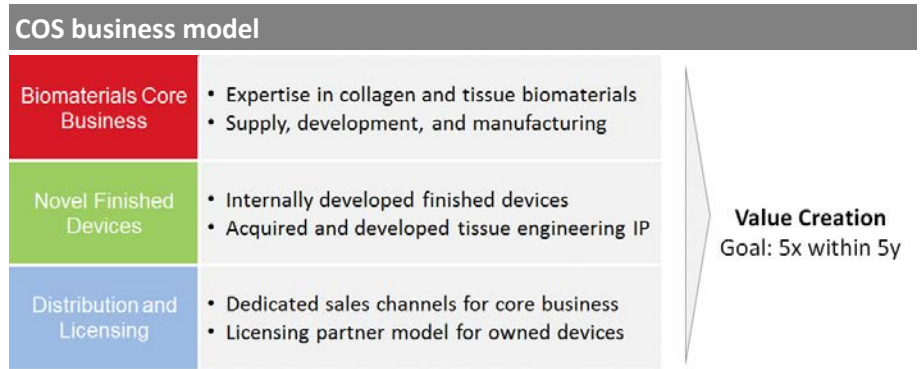
	1H'16	2H'16	1H'17	2H'17E
GBP:USD	1.54	1.38	1.37	1.23
GBP:NZD	2.25	2.03	1.94	1.66
North America	846	962	980	1,256
Asia Pacific	561	614	663	760
Europe	35	112	187	263
<b>Group sales</b>	<b>1,442</b>	<b>1,688</b>	<b>1,831</b>	<b>2,279</b>

Source: Hardman & Co Life Sciences Research

As a consequence of this, we have re-balanced our expectations for the full year, but there is little impact on overall sales forecasts (see page 7).

## Global operations

Collagen Solutions’ business model is outlined in the following graphic:



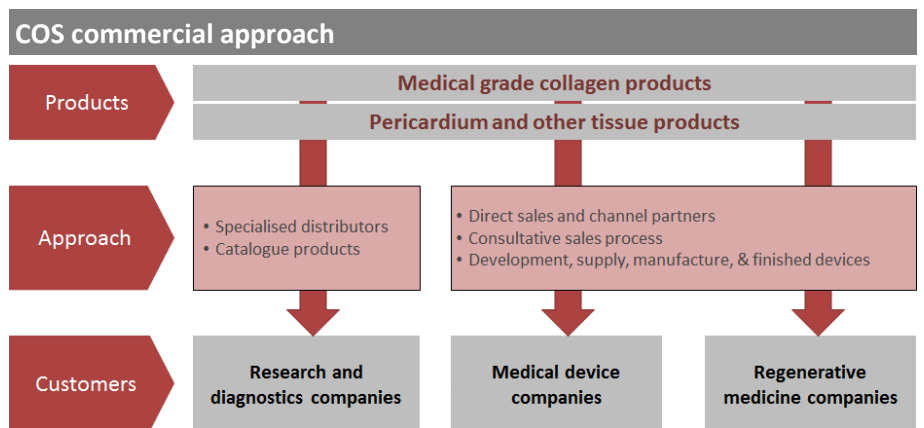
Source: Collagen Solutions

In May 2016, the Company announced a refocused strategy for acceleration of its growth rate globally. Jamal Rushdy was re-appointed to CEO from Chief Business Officer to steer this change, which is focused on three priority objectives:

- ▶ Development of direct and distributor sales channels for core business
- ▶ Focus on marketing, with a global re-branding
- ▶ Improved execution speed in OEM and R&D

Implementation of this new strategy was evident in the interim results for 1H’17. In particular, development and investment of Collagen Solutions’ Asia Pacific presence has resulted in substantial increases in both marketing and SG&A spend.

## Biomaterials contracts



Source: Collagen Solutions

### Sales channels

COS has completed several strategic initiatives to build scalability into its global sales channels for the core business segments: development, contract manufacture and supply of biomaterials. Much of this investment focuses on operations in Asia, with progress in both distribution and direct sales operations.

Specialised distributor agreements were recently reached for research markets in South Korea and Japan. Commercial offices have been secured in Seoul, South Korea, and Minneapolis for direct B2B biomaterials sales and marketing. Finally, a Wholly Foreign-Owned Enterprise (WFOE) has been established for expansion in China as part of the Cre8ive joint venture.

### New hires

As part of Collagen Solutions’ global branding launch, three new commercial managers, a sales operations manager, and global marketing manager have been hired. This means that COS now has six sales and marketing team members in place across the UK, South Korea, and North America (e.g. Minneapolis), increasing the company’s visibility globally. Supporting continued scalability of the biomaterials business, Kevin Darling was appointed General Manager of New Zealand operations – which is COS’ manufacturing site in addition to Glasgow – in October this year. Kevin has more than 20 years’ experience in sales and marketing management roles at 3M, BOC Gases, and Mars.

## Finished devices

The new strategy emphasised investment in R&D towards production of proprietary finished devices, to be commercialised via a licensing partner model. Our September note, ‘Focus on R&D’, illustrates that the value of collagen disease models for medical research is recognised by funding bodies, with multiple cross-sector research grants now awarded by the European Commission and others.

COS is also investing in later stage R&D. Three finished device projects are underway, based on COS’ in-licensed Orthomimetics product family, and others in the wound care and orthopaedics markets.

### ChondroMimetic: Cartilage



Source: Collagen Solutions

### ChondroMimetic

The first Orthomimetics product is the ChondroMimetic osteochondral plug - a collagen scaffold device intended for cartilage repair in joint injuries. COS is on track to initiate a six-year post-marketing surveillance study within the next three months, and to re-gain CE mark by the middle of 2017. In the event that ChondroMimetic reaches the market via partnerships/licensing arrangement, COS will be well on-track to capitalise on this year’s investment in R&D.

### Fibrillar Collagen: Wounds



Source: Collagen Solutions

### Fibrillar Collagen

Development of fibrillar collagen scaffold for primary applications in wound care has been initiated internally at COS. Early results showed progress in developing fibrillar collagen formulations that enable cells sprayed onto a wound site to remain viable during the process, and adhere *in situ*. Future work will investigate the clinical effectiveness of these formulations. Results were recently presented at the TERMIS-AM in San Diego – a key conference that focused this year on Tissue Engineering and Regenerative Medicine. The target is to achieve market clearance for a wound care sub-indication in calendar 2018.

### Bone healing



Source: Collagen Solutions

### Bone healing

Tissue engineering expertise has also been strengthened in a third finished device project that is targeting the bone grafting market. A patent has been filed for a natural collagen matrix and osteoconductive technology – target market clearance is expected in 2018.

## Changes to forecasts

Although there has been a rebalancing of our sales forecasts based on both business segment and on geographical analyses following the disclosure of more information, this has not resulted in any material changes in our numbers.

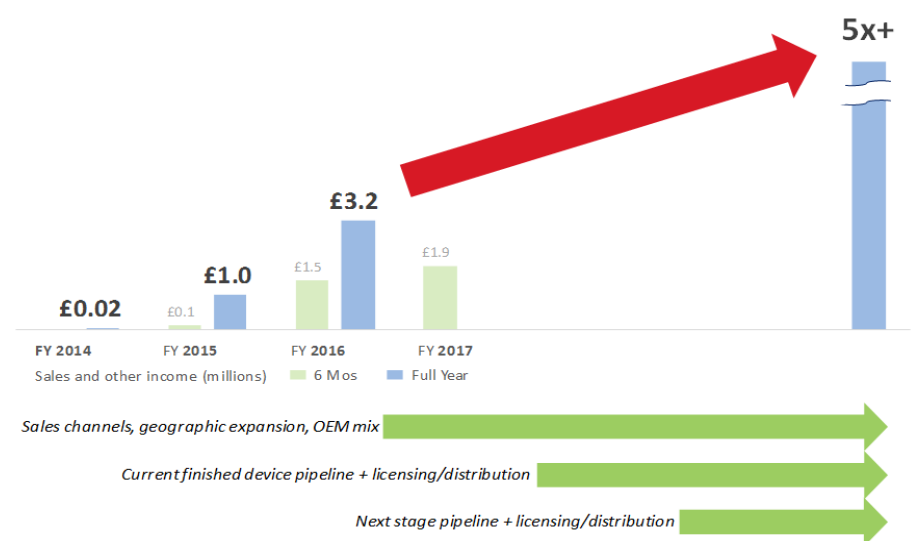
Changes to forecasts				
Year to March (£000)	----- 2017E -----		----- 2018E -----	
	Old	New	Old	New
Sales	4,107	4,110	5,144	5,170
COGS	-1,048	-1,070	-1,287	-1,320
<b>Gross profit</b>	<b>3,059</b>	<b>3,040</b>	<b>3,857</b>	<b>3,850</b>
Gross margin	74.5%	74.0%	75.0%	74.5%
Marketing	-739	-740	-772	-775
SG&A	-2,218	-2,252	-2,315	-2,326
R&D	-741	-750	-790	-825
Other income	0	100	0	150
<b>EBITDA</b>	<b>-639</b>	<b>-601</b>	<b>-19</b>	<b>73</b>
D&A	-447	-447	-527	-527
<b>Underlying EBIT</b>	<b>-1,085</b>	<b>-1,048</b>	<b>-546</b>	<b>-454</b>
Net cash/(debt)	1,314	1,366	-432	-284

Source: Hardman & Co Life Sciences Research

- ▶ **Admin costs (SG&A):** Costs were ahead of expectations in the first half and have been increased for the full year reflecting the rise in senior personnel and the fact that many of these costs are overseas and sensitive to the weakness of sterling
- ▶ **Other income/grants:** COS has won two grants with a 3-5-year timeframe. These have produced a revision of +£100k in 2017E and +£150k in 2018E
- ▶ **EBITDA:** The benefit of the grant income has moved COS to EBITDA positive in fiscal 2019. It also benefits the net cash/debt position

Management has indicated an aspiration to grow sales five-fold over the next five years, equivalent to a CAGR of ca.50% over this period.

### Management revenue target



Source: Collagen Solutions

## Financial models

### Profit & Loss

- ▶ **Forecast sales** – Underlying growth in the range 25-30% for forecast period which is currently below management's new aspirational target
- ▶ **Gross margin** – Stable and dependent on product mix, could rise over time as more engineered products are sold and 'owned products' are launched
- ▶ **Personnel** – Further investment in commercial personnel and some China JV costs will see continuing increases in administration and marketing costs
- ▶ **Shares** – The increased number of shares in 2017 and 2018 reflects the deferred consideration for Collbio, payable in shares

Profit & Loss						
Year end March (£000)	2014	2015	2016	2017E	2018E	2019E
GBP:USD	0.00	1.57	1.46	1.30	1.30	1.30
GBP:NZD	0.00	1.95	2.03	1.80	1.80	1.80
<b>Sales</b>	<b>24</b>	<b>973</b>	<b>3,130</b>	<b>4,110</b>	<b>5,170</b>	<b>6,720</b>
Cost of goods sold	-12	-214	-811	-1,070	-1,319	-1,648
<b>Gross profit</b>	<b>12</b>	<b>759</b>	<b>2,319</b>	<b>3,041</b>	<b>3,850</b>	<b>5,072</b>
Gross margin	49.7%	78.0%	74.1%	74.0%	74.5%	75.5%
Admin expenses	-304	-1,106	-2,107	-2,252	-2,326	-2,688
Selling & marketing	-72	-219	-333	-740	-775	-907
R&D	0	-160	-367	-750	-825	-850
Other income	0	63	114	100	150	150
<b>Underlying EBITDA</b>	<b>-364</b>	<b>-663</b>	<b>-374</b>	<b>-601</b>	<b>73</b>	<b>777</b>
Depreciation	-13	-75	-175	-255	-315	-315
Amortisation	-4	-55	-172	-192	-212	-232
<b>Underlying EBIT</b>	<b>-381</b>	<b>-793</b>	<b>-721</b>	<b>-1,048</b>	<b>-454</b>	<b>231</b>
Share based costs	-25	-27	-36	-50	-50	-50
Exceptional items	-75	-155	152	0	0	0
<b>Statutory EBIT</b>	<b>-480</b>	<b>-975</b>	<b>-604</b>	<b>-1,098</b>	<b>-504</b>	<b>181</b>
Net financials	0	-128	-262	-124	-229	-203
Underlying pre-tax	-381	-920	-983	-1,172	-682	28
Exceptional items	0	0	0	0	0	0
<b>Reported pre-tax</b>	<b>-480</b>	<b>-1,102</b>	<b>-866</b>	<b>-1,222</b>	<b>-732</b>	<b>-22</b>
Tax payable/credit	0	-21	-114	-148	-193	-241
<b>Underlying net income</b>	<b>-381</b>	<b>-942</b>	<b>-1,097</b>	<b>-1,320</b>	<b>-875</b>	<b>-213</b>
Statutory net income	-480	-1,123	-980	-1,370	-925	-263
<b>Ordinary shares in issue:</b>						
Period-end (m)	63.8	171.0	171.4	179.6	187.8	187.8
Weighted average (m)	43.7	96.4	171.2	172.1	180.3	187.8
Fully diluted (m)	47.7	102.3	180.4	181.3	189.5	197.1
<b>Underlying Basic EPS (p)</b>	<b>-0.87</b>	<b>-0.98</b>	<b>-0.64</b>	<b>-0.77</b>	<b>-0.49</b>	<b>-0.11</b>
Statutory basic EPS (p)	-1.10	-1.17	-0.57	-0.80	-0.51	-0.14
<b>U/I fully-diluted EPS (p)</b>	<b>-0.87</b>	<b>-0.98</b>	<b>-0.64</b>	<b>-0.77</b>	<b>-0.49</b>	<b>-0.11</b>
Stat. fully-diluted EPS (p)	-1.10	-1.17	-0.57	-0.80	-0.51	-0.14
DPS (p)	0.00	0.00	0.00	0.00	0.00	0.00

Source: Hardman & Co Life Sciences Research



## Balance sheet

- ▶ The balance sheet continues to reflect that the company is investing in order to grow the business and take advantage of opportunities
- ▶ Change in the net cash position of the group reflects the impact of the £2.4m deferred cash payments to former Collbio/CS (US) and Southern Lights shareholders as part of the acquisition agreements
- ▶ Management indicated that it is investigating the possible use of debt financing to fund, in part, these payments and also the investment in R&D and marketing, given that certain parts of the business are trading profitably and generating cash
- ▶ R&D investment is written-off in the year in which it is incurred – we expect a modest amount of R&D to be capitalised in the full year for ChondroMimetic
- ▶ Trade creditors was boosted at the end of fiscal 2016 by the receipt of £250k Horizon 2020 grant funding
- ▶ Forecasts assume that COS agrees £2.5m of debt financing sometime during the course of the year

<b>Balance sheet</b>						
<b>@31st March (£000)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017E</b>	<b>2018E</b>	<b>2019E</b>
Shareholders' funds	6,256	12,853	13,896	12,526	11,601	11,338
Cumulated goodwill	0	0	0	0	0	0
<b>Total equity</b>	<b>6,256</b>	<b>12,853</b>	<b>13,896</b>	<b>12,526</b>	<b>11,601</b>	<b>11,338</b>
Share capital	683	1,755	1,759	1,759	1,839	1,919
Reserves	5,573	11,099	12,137	10,767	9,762	9,419
Deferred tax	0	285	253	233	213	193
Long-term loans	0	88	63	2,563	2,563	2,563
Short-term debt	0	22	46	46	46	46
<i>less: Cash</i>	1,492	3,391	2,493	3,975	2,325	1,332
<i>less: Deposits</i>	0	0	0	0	0	0
<i>less: Long-term invests.</i>	0	0	0	0	0	0
<b>Invested capital</b>	<b>7,174</b>	<b>14,176</b>	<b>14,203</b>	<b>13,830</b>	<b>13,336</b>	<b>12,836</b>
Fixed assets	232	794	1,161	1,059	913	798
Intangible assets	6,894	12,919	12,971	12,780	12,568	12,336
Inventories	39	219	264	347	436	567
<i>Trade debtors</i>	0	419	429	563	709	921
<i>Other debtors</i>	167	226	207	207	207	207
<i>Tax liability/credit</i>	0	-40	0	-114	-148	-193
<i>Trade creditors</i>	0	-215	-694	-750	-772	-964
<i>Other creditors</i>	-160	-144	-135	-261	-577	-837
Debtors less creditors	7	245	-193	-355	-582	-865
<b>Invested capital</b>	<b>7,174</b>	<b>14,176</b>	<b>14,203</b>	<b>13,830</b>	<b>13,336</b>	<b>12,836</b>
<b>Net cash/(debt)</b>	<b>1,492</b>	<b>3,282</b>	<b>2,384</b>	<b>1,366</b>	<b>-284</b>	<b>-1,277</b>
NAV/share (p)	14	13	8	104	108	111
Stock days	-	220	109	44	45	44
Debtor days	-	79	49	246	211	192
Creditor days	-	183	205	104	108	111

Source: Hardman & Co Life Sciences Research

## Cashflow

- ▶ COS is expected to be EBITDA positive in fiscal 2019 which shows through in the cash being generated from operations
- ▶ A modest amount of tax is generally payable each year as the company makes a small profit in certain jurisdictions within its global operations
- ▶ Maintenance cap-ex is approximately £0.15m per annum. Higher levels of expenditure have been incurred for investment in manufacturing facilities. Some cap-ex will be needed when the ChondroMimetic marketing and development plans are finalised
- ▶ The Collbio deferred consideration (two tranches of shares) is cash neutral in fiscal 2017. However, the deferred cash payments for CS (US) (ca £410k spread over two years) and Southern Lights (ca. £1m per annum) will impact cashflows in 2018 and 2019

Cashflow						
Year end March (£000)	2014	2015	2016	2017E	2018E	2019E
<b>Operating profit</b>	<b>-381</b>	<b>-793</b>	<b>-721</b>	<b>-1,048</b>	<b>-454</b>	<b>231</b>
Depreciation	13	75	175	255	315	315
Amortisation	4	55	172	192	212	232
Inventories	-13	-123	-48	-83	-89	-131
Working capital	-72	-105	469	-78	-124	-20
Exceptionals/provisions	-75	-155	152	0	0	0
Other	-1	-106	-346	0	0	0
<b>Net cash used in ops.</b>	<b>-525</b>	<b>-1,152</b>	<b>-147</b>	<b>-762</b>	<b>-141</b>	<b>626</b>
Net interest	0	-2	2	12	7	-17
Tax paid/received	0	-26	-194	-114	-148	-193
<b>Operational cashflow</b>	<b>-525</b>	<b>-1,180</b>	<b>-338</b>	<b>-864</b>	<b>-282</b>	<b>416</b>
Capital expenditure	0	-159	-464	-153	-169	-200
Sale of fixed assets	0	13	1	0	0	0
<b>Free cashflow</b>	<b>-525</b>	<b>-1,326</b>	<b>-801</b>	<b>-1,018</b>	<b>-451</b>	<b>216</b>
Dividends	0	0	0	0	0	0
Acquisitions	-1,357	-2,192	-207	-1,027	-2,200	-1,209
Other investments	0	-127	-93	0	0	0
<b>Cashflow after invests.</b>	<b>-1,882</b>	<b>-3,645</b>	<b>-1,101</b>	<b>-2,045</b>	<b>-2,651</b>	<b>-993</b>
Share issues	3,374	5,422	207	1,027	1,000	0
Currency effect	0	12	-18	0	0	0
<b>Change in net debt</b>	<b>1,492</b>	<b>1,790</b>	<b>-898</b>	<b>-1,018</b>	<b>-1,651</b>	<b>-993</b>
Hardman FCF/share (p)	-1.20	-1.22	-0.20	-0.50	-0.16	0.22
Opening net cash	0	1,492	3,282	2,384	1,366	-284
<b>Closing net cash</b>	<b>1,492</b>	<b>3,282</b>	<b>2,384</b>	<b>1,366</b>	<b>-284</b>	<b>-1,277</b>

Source: Hardman & Co Life Sciences Research

## Disclaimer

*Hardman & Co provides professional independent research services. Whilst every reasonable effort has been made to ensure that the information in the research is correct, this cannot be guaranteed.*

*The research reflects the objective views of the analysts named on the front page. However, the companies or funds covered in this research may pay us a fee, commission or other remuneration in order for this research to be made available. A full list of companies or funds that have paid us for coverage within the past 12 months can be viewed at <http://www.hardmanandco.com/>*

*Hardman & Co has a personal dealing policy which debars staff and consultants from dealing in shares, bonds or other related instruments of companies which pay Hardman for any services, including research. They may be allowed to hold such securities if they were owned prior to joining Hardman or if they were held before the company appointed Hardman. In such cases sales will only be allowed in limited circumstances, generally in the two weeks following publication of figures.*

*Hardman & Co does not buy or sell shares, either for its own account or for other parties and neither does it undertake investment business. We may provide investment banking services to corporate clients.*

*Hardman & Co does not make recommendations. Accordingly, we do not publish records of our past recommendations. Where a Fair Value price is given in a research note this is the theoretical result of a study of a range of possible outcomes, and not a forecast of a likely share price. Hardman & Co may publish further notes on these securities/companies but has no scheduled commitment and may cease to follow these securities/companies without notice.*

*Nothing in this report should be construed as an offer, or the solicitation of an offer, to buy or sell securities by us.*

*This information is not tailored to your individual situation and the investment(s) covered may not be suitable for you. You should not make any investment decision without consulting a fully qualified financial adviser.*

*This report may not be reproduced in whole or in part without prior permission from Hardman & Co.*

*Hardman Research Ltd, trading as Hardman & Co, is an appointed representative of Capital Markets Strategy Ltd and is authorised and regulated by the Financial Conduct Authority (FCA) under registration number 600843. Hardman Research Ltd is registered at Companies House with number 8256259. However, the information in this research report is not FCA regulated because it does not constitute investment advice (as defined in the Financial Services and Markets Act 2000) and is provided for general information only.*

*Hardman & Co Research Limited (trading as Hardman & Co)  
11/12 Tokenhouse Yard  
London  
EC2R 7AS  
T +44 (0) 207 929 3399*

*Follow us on Twitter @HardmanandCo*

*(Disclaimer Version 2 – Effective from August 2015)*

## Hardman Team

### Management Team

+44 (0)20 7929 3399

John Holmes	jh@hardmanandco.com	+44 (0)207 148 0543	Chairman
Keith Hiscock	kh@hardmanandco.com	+44 (0)207 148 0544	CEO

### Marketing / Investor Engagement

+44 (0)20 7929 3399

Richard Angus	ra@hardmanandco.com	+44 (0)207 148 0548
Max Davey	md@hardmanandco.com	+44 (0)207 148 0540
Antony Gifford	ag@hardmanandco.com	+44 (0)7539 947 917
Vilma Pabilionyte	vp@hardmanandco.com	+44 (0)207 148 0546

### Analysts

+44 (0)20 7929 3399

#### Agriculture

Doug Hawkins	dh@hardmanandco.com
Yingheng Chen	yc@hardmanandco.com
Thomas Wigglesworth	tcw@hardmanandco.com

#### Bonds

Brian Moretta	bm@hardmanandco.com
Mark Thomas	mt@hardmanandco.com

#### Building & Construction

Tony Williams	tw@hardmanandco.com
Mike Foster	mf@hardmanandco.com

#### Consumer & Leisure

Steve Clapham	sc@hardmanandco.com
Mike Foster	mf@hardmanandco.com
Jason Streets	sc@hardmanandco.com

#### Financials

Brian Moretta	bm@hardmanandco.com
Mark Thomas	mt@hardmanandco.com
Chris Magennis	cm@hardmanandco.com

#### Life Sciences

Martin Hall	mh@hardmanandco.com
Dorothea Hill	dmh@hardmanandco.com
Gregoire Pave	gp@hardmanandco.com

#### Media

Derek Terrington	dt@hardmanandco.com
------------------	---------------------

#### Mining

Ian Falconer	if@hardmanandco.com
--------------	---------------------

#### Oil & Gas

Stephen Thomas	st@hardmanandco.com
Mark Parfitt	mp@hardmanandco.com
Angus McPhail	am@hardmanandco.com

#### Property

Tony Williams	tw@hardmanandco.com
Mike Foster	mf@hardmanandco.com

#### Services

Mike Foster	mf@hardmanandco.com
-------------	---------------------

#### Special Situations

Steve Clapham	sc@hardmanandco.com
Paul Singer	ps@hardmanandco.com

#### Technology

Mike Foster	mf@hardmanandco.com
-------------	---------------------

#### Utilities

Nigel Hawkins	nh@hardmanandco.com
---------------	---------------------

### Hardman & Co

11/12 Tokenhouse Yard  
London  
EC2R 7AS  
United Kingdom

Tel: +44(0)20 7929 3399  
Fax: +44(0)20 7929 3377

[www.hardmanandco.com](http://www.hardmanandco.com)

