Collagen Solutions

Transitioning to accelerated sustainable growth

Collagen Solutions is a biomaterials company developing and manufacturing medical grade collagen components for use in medical devices, research, and regenerative medicine. A number of investment initiatives have been introduced recently to accelerate the rate of growth, including global commercial infrastructure and development of a pipeline of finished medical devices, the first of which will be ChondroMimetic for repair of small cartilage lesions. Recent results have highlighted the progress that has been made, and 2018 looks set to benefit from the launch of its first proprietary finished device, ChondroMimetic.

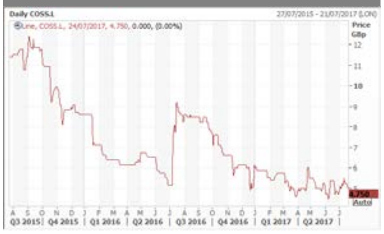
- **Strategy**: Management has embarked on an investment strategy through a series of initiatives to increase the growth opportunities. This strategy is moving COS from a reliable quality collagen supplier to one that also has proprietary products that will move it into profitability, and cash generative, at a faster pace.
- **2017 sales:** Underlying sales growth in 2017 showed early benefits from marketing initiatives, with underlying sales rising +17%, boosted by currency gains at the reported level to £3.95m (£3.13m). Further growth is anticipated in the current year following the recent signing of nine new contracts.
- **Finished devices:** Led by ChondroMimetic for articular cartilage repair, COS has embarked on a follow-up study with 15/17 patients implanted with the device eight years ago. Positive outcomes would support re-submission for CE Mark at the end of 2017 and provide unprecedented data for marketing purposes.
- **Risks:** Management has re-iterated its aspirational, but achievable, target to grow sales five-fold within five years (starting fiscal 2016), equating to a demanding +38% CAGR. Time to get CE Mark again for ChondroMimetic is key. Management highlighted also a potential contract risk in Korea for fiscal 2019.
- **Investment summary:** Results provided clear evidence that the company has responded well to its strategic transition. Investment in marketing initiatives and new opportunities (China JV, Orthomimetics, plus other new products) continues to build a pipeline of strategic relationships that is expected to drive long term growth. The recent capital increase and debt financing leaves COS well positioned to turn profitable and cashflow break-even in fiscal 2020.

Financial summary and valuation

Year end March (£000)	2015	2016	2017	2018E	2019E	2020E
Sales	973	3,130	3,946	5,200	7,230	9,785
Underlying EBITDA	-663	-374	-1,209	-1,170	30	1,603
Underlying EBIT	-793	-721	-1,658	-1,880	-701	853
Underlying PBT	-920	-983	-1,790	-2,141	-1,030	665
Statutory PBT	-1,102	-866	-1,614	-2,241	-1,130	565
Underlying EPS (p)	-0.98	-0.64	-1.04	-0.72	-0.38	0.11
Statutory EPS (p)	-1.17	-0.57	-0.95	-0.75	-0.41	0.08
Net cash/(debt)	3,282	2,384	7,072	3,471	438	-508
Capital increase	5,422	207	6,462	1,000	0	0
P/E (x)	-5.1	-7.8	-4.8	-7.0	-13.2	44.1
EV/sales (x)	9.4	2.9	2.3	1.8	1.3	0.9
EV/EBITDA (x)	-	-	-	-	-	5.7

Source: Hardman & Co Life Sciences Research

Pharmaceuticals & Biotechnology



Source: Eikon Thomson Reuters

Market data

EPIC/TKR	COS
Price (p)	5.0
12m High (p)	9.3
12m Low (p)	4.2
Shares (m)	324.3
Mkt Cap (£m)	16.2
EV (£m)	9.1
Free Float*	66%
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
Chairman	David Evans

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Key shareholders

Directors + management	20.7%
Seneca	13.2%
Calculus Capital	9.5%
Livingbridge	4.6%
Helium Rising Stars	4.0%
Rathbones IM	4.0%

Diary

30 Aug-17	AGM
4Q-17	CM CE Mark filing

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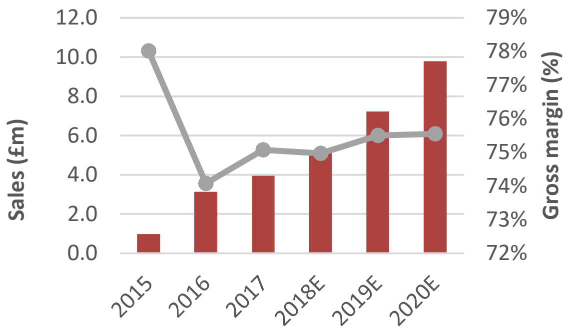
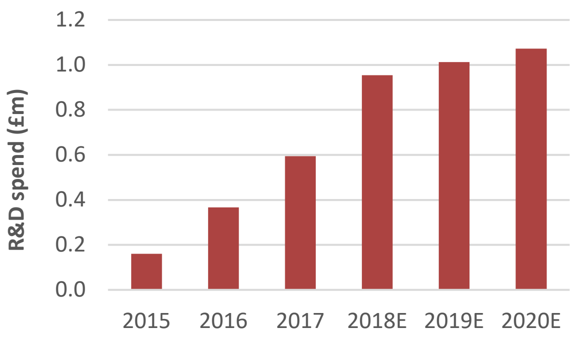
Sales & margin



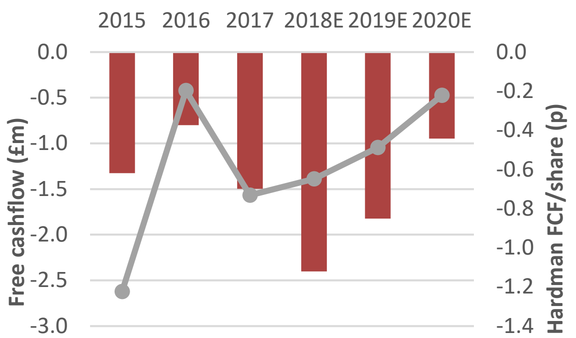
- Sales are expected to grow substantially as customers receiving regulatory approvals and commercialising investments realise new business
- Numerous new opportunities, but timing of their contribution is complex and, therefore, are not included in our forecasts
- The gross margin is dependent on the mix of business – contract manufacturing commands lower margins
- Gross margin will start to trend upwards when proprietary products reach commercialisation

R&D spend



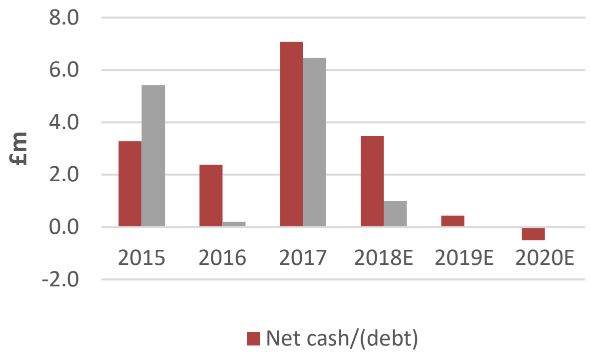
- COS currently invests about 11% of sales into R&D, but this is modest in absolute terms
- Investment in R&D spend will rise substantially in order to deliver the strategy of developing 'owned products'
- COS adds value through development of customer formulations
- Additional R&D spend is being capitalised on the balance sheet for late-stage proprietary products

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
- Some flexibility regarding timing of cap-ex
- Cashflow forecasts are conservatively based with future changes more likely to be in an upward direction
- 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) – do influence the cash position
- Capital increases in 2018 also reflect deferred consideration for acquisition in shares
- A licensing deal for ChondroMimetic could result in a cash up-front payment to COS

Source: Company data; Hardman & Co Life Sciences Research

2017 results

Key features

Financials

- **Sales:** Underlying growth was around +17%, boosted £380k by currency gains, to a reported figure of £3.95m (£3.13m)
- **Grant income:** Considered as 'other income' rather than product sales and is not included in our sales forecasts; the outcome was £145k receivable, compared to our forecast £100k
- **R&D spend:** Although there was a significant increase (+62%) in R&D investment, as planned, to -£0.97m (-£0.37m) in order to advance, in particular, proprietary products, this was below forecasts, as timing of investment moved some of this spend from 2017 into 2018, and some R&D was capitalised
- **Underlying EBIT:** Both EBITDA and EBIT emerged modestly ahead of expectations, led by lower than expected COGS and hence, better gross margins
- **Capital increase:** £6.8m raised in March 2017 through a Placing and Open Offer; plus £4.0m in private bonds with Norgine Ventures (two tranches remaining)
- **Net cash:** The group ended the year with net cash of £7.1m at 31st March 2017, which was about £0.5m better than forecast

Summary of actual vs forecast results

Year end March (£000)	2016 actual	2017 actual	Growth %	2017 forecast	Delta
Sales	3,130	3,946	+17% CER	4,080	-134
COGS	-811	-984	+21%	-1,080	+96
Gross margin	74.1%	75.1%	+1%	73.6%	+1.5pp
Other income	114	145	+27%	100	+45
EBITDA	-374	-1,209	-223%	-1,277	+68
Underlying EBIT	-721	-1,658	-130%	-1,724	+66
Underlying EPS (p)	-0.64	-1.04	-63%	-1.08	+0.04

Numbers may not add up exactly due to rounding
Source: Hardman & Co Life Sciences Research

Operational

- **Growth initiatives x7:** Including investment in both the sales and marketing team and leadership to drive sales channels; launch of marketing brand; and updated website
- **Tissue source:** Initiative implemented to accelerate tissue business (bovine pericardium) by increasing process efficiencies and the number of abattoirs
- **Geographical expansion:** Access to Asian markets including China, via Cre8ive jv, and Japan, via distributers. Increased sales personnel in US and EU
- **Partnership agreements:** Total of nine deals made across geographical reach including distribution, contract manufacturing, and development agreements

Post-period event

- **ChondroMimetic data:** Eight-year follow up study initiated on 15 of 17 patients originally treated, with MRI scans to measure effective integration of scaffold. Following CE Mark, a partner will be engaged for commercialisation

Operational update

Delivering on strategic plan

Boosting core business…

…investing in proprietary products

Collagen Solutions is going through a transition period: at the beginning of fiscal 2017, the Board committed to a strategic plan to boost growth in its core business – materials supply, development services, contract manufacturing – whilst investing in R&D towards the regulatory approval of a pipeline of finished devices, which will be commercialised through a partner(s). The revised strategy has three primary objectives in order to achieve management's stated goal to increase sales five-fold over a five year period, equivalent to CAGR of ca.+38%:

- 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

Corporate strategy

Source: Collagen Solutions

Pure bovine biomaterial…

…sourced from Australia and NZ

One of COS' major advantages is the quality of its raw material, which underpins all its business segments. Unlike many competitors its bovine biomaterial is mostly sourced from abattoirs in Australia and New Zealand, which have the best BSE-free status as measured by the World Organisation for Animal Health (OIE). A major ongoing aim for COS is to increase market share in its operating countries, in addition to expanding geographically to new territories.

Target: grow total revenue by 5x…

…by 2021

Management announced a growth target in February 2017 which was restated and reinforced at the FY results: to grow total revenue '5 times in 5 years' – by 2021 (with the starting point being fiscal 2016 sales of £3.13m). However, although finished devices will be an important contributor, two thirds of this growth is likely to come from the existing core businesses.

Growth initiative achievements

To deliver organic growth in the core business, COS has been focusing on developing its sales channels, refining its marketing and brand, and driving operational excellence.

New sales and marketing team in place…

…nine new customer agreements delivered

A full specialised direct sales team was recruited and trained to deliver on sales channel development. This contributed directly to nine new customer agreements (discussed below according to Geographical location) in 2017. Helping to deliver these new agreements was an initiative to improve operational excellence with a new OEM programme that has improved time to close deal-flow and throughput.

Marketing communication improvements

As part of the marketing initiative, a marketing communications programme was implemented which improved customer engagement particularly as measured by social media, web traffic, and commercial leads.

Leadership hires

Three leadership appointments: sales, commercial, and R&D

A new leadership team has been appointed to oversee the accelerated growth strategy. Brad Selman has joined the company as VP of Global Sales & Marketing to lead the commercial team; he is based in Minneapolis. Taking over leadership in New Zealand and the ex-Southern Lights business is Kevin Darling as General Manager. His predecessor, Geoff Bennett moved to a non-executive director position in January. Chris Wattengel joined in March as VP Global R&D; he will lead the development programmes for proprietary finished devices.

Finally, Dr Stewart White, who co-founded Collagen Solutions, stepped down from the Board under mutual agreement, but will continue as a member of the Scientific Advisory Board. The SAB was created in January 2017 and has four members.

Capital increase

To fund the revised growth plan, in March COS undertook a fundraise via a Placing and Open Offer as summarised in the below table. It also took on up to £4.0m debt financing from Norgine Ventures, in the form of private bonds: £2.0m was drawn down at the period end, with two tranches of £1.0m each remaining, conditional on achieving specified sales targets. Norgine is a specialist pharmaceutical company; the relationship with the venture arm provides access to Norgine's expertise and is a good validation of Collagen Solutions. Details were discussed in our February note '*Capital increase to support accelerated growth*'.

Fundraise statistics

Type of capital	Number of shares	Issue price	Proceeds
Existing shares in issue	**179,631,290**	-	-
Placing	123,799,999	5p	£6.2m
Open Offer	12,877,788	5p	£0.6m
Enlarged share capital	**316,299,077**	-	-

Source: Shareholder Circular; Hardman & Co Life Sciences Research

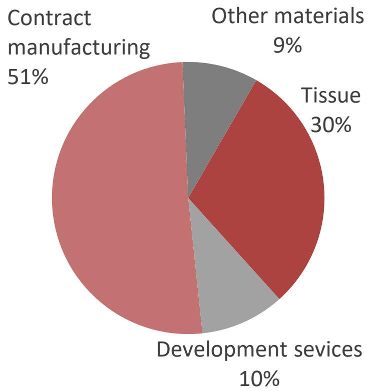
Subsequent to this capital increase, a further 8.0m shares were issued in relation to the deferred consideration on the Collbio Limited acquisition in December 2013.

Products and services

Core business

Collagen's core business is contract manufacture, development and B2B supply of high quality medical grade collagen and other biomaterials including pericardium tissue. Products are particularly used in cardiovascular, orthopaedic and woundcare medical devices, and in research.

Segment sales (FY 2017)



Source: Hardman & Co Life Sciences Research

Contract manufacture and development

In 2017, contract manufacture of collagen products, carried out at the GMP facilities in Scotland and New Zealand, was still the biggest segment by revenue, with £2.0m in sales (+6% underlying growth). Revenue is sticky across the core business, but particularly in contract manufacture where embedded know-how makes switching complex. Development services FY 2017 sales were £0.4m, +46% CER growth on 2016.

Tissue/other materials

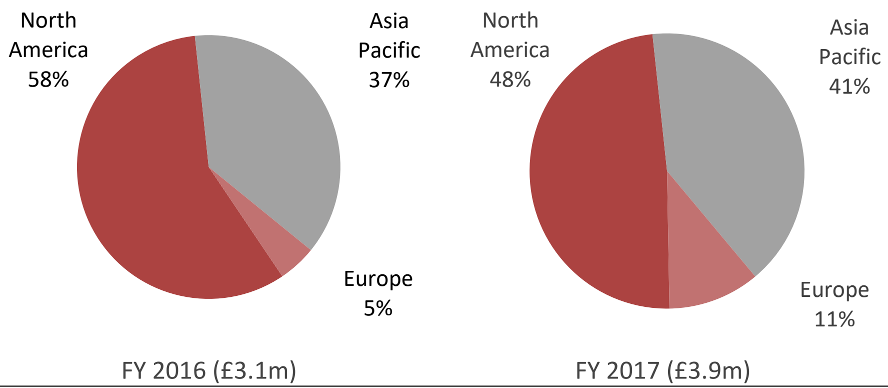
Sales of bovine pericardium (heart tissue) are of particular focus, with combined revenues from the tissue/other materials segment growing +30% to £1.5m in 2017. The investment in sales and marketing has already fed through, with additional customer launches for heart valve devices expected in 1H'18. In addition, sales of materials for research have grown this year through distribution agreements and a new on-line shop, which will impact 2018 sales.

Geographical expansion

Sales expansion notable particularly in Europe

The company has operations in Minneapolis USA, Glasgow, and Marton New Zealand, an R&D facility in California (which will be consolidated with the Minneapolis operation in 2018) and sales offices in Seoul and Sydney. Expansion of COS sales to additional territories has been notable this financial year, particularly in Europe, which has been the first territory to benefit from the early investment in sales teams as part of the refocused strategy.

Geographical sales – comparison of 2016 and 2017



Source: Hardman & Co Life Sciences Research

In fiscal 2017, sales growth in the US appeared to be weak at +1% CER. However, there are two explanations for this. First, a major and established US-based customer places orders through its subsidiary in Ireland and sales were recorded under 'Europe'. Secondly, one customer ordered product for clinical trials in fiscal 2016, which was not repeated fully again in fiscal 2017 while another customer has a product awaiting CE Mark, with demand for more supply expected to recur when regulatory approval is received.

Nine new commercial agreements…

…across three territories

There is a substantial lead time between making investment in marketing and seeing the benefits. However, COS has achieved nine new commercial agreements across Europe, Asia and North America over recent months. Given that the earliest investment was made in Europe, it is not surprising to find that this has generated more of the deals, followed by Asia and latterly the US. These deals are spread across the various business segments.

Recent commercial deals

Territory	#	Segment	#
Europe	4	Development	2
Asia Pacific	3	Contract manufacturing	2
North America	2	Material supply	3
		Distribution	2
	9		**9**

Source: Collagen Solutions; Hardman & Co Life Sciences Research

Developments in Asia

Strong sales growth (+24% CER) was reported for the Asia Pacific region in fiscal 2017 and with new contracts, further progress is expected in the current financial year. The biggest territory for COS in Asia is South Korea, with customers inherited from the Southern Lights acquisition. Management highlighted that a significant contract is due for renewal towards the end of fiscal 2018. This contract is subject to minimum supply off-take. However, in regular meetings with the company, management is aware that the contractual minima are greater than current demand and represent a potential oversupply issue that could affect fiscal 2019.

COS has a good long-standing relationship with this customer and is discussing various ways to mitigate a possible ‘sales holiday’. These include:

- Helping the customer to increase the number of sales channels into the US
- Using COS’s overseas network through which to sell products made in Korea
- Supplying the customer with higher cost, value added collagen for its development programmes in addition to the materials supplied currently

Management is still expecting to have the contract renewed and to supply the customer long-term, but this is likely to be on different terms with reduced minima and possibly for different products. It is addressing the situation early and an update is expected along with the 2018 interim results announcement in December.

In other parts of Asia, early sales have been achieved in Japan, and COS is continuing to develop its jv with Cre8ive in Beijing, examining the potential options with a view to moving forward in the near future.

Proprietary product development

Since IPO, a key strategic objective of Collagen Solutions has been to move its products further up the value chain, thereby retaining more of the margin. Renowned for consistency of supply of quality medical grade collagen, the aim was to develop products all the way through to regulatory approval and to control the whole chain of production. It has always intended to out-licence and supply the end product for commercialisation.

Moving up the value chain

Source: Hardman & Co Life Sciences Research

ChondroMimetic – cartilage scaffold

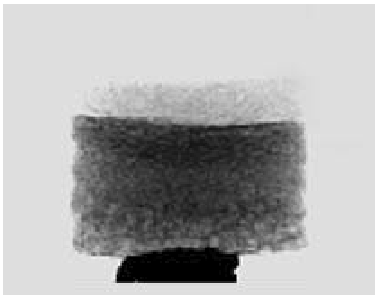
Collagen Solutions obtained an exclusive worldwide licence for the assets of ChondroMimetic, other associated products and the IP from the founder (Dr Andrew Lynn) and Cambridge Enterprise in September 2015 for £200k + a single digit royalty. Since then, COS has been undertaking initiatives to regain the CE Mark for ChondroMimetic and considerable progress has been made during the last 12 months. Approval is anticipated mid-2018.

- Internal manufacturing validation under way
- Re-appointment of original Notified Body
- Re-examination via MRI scan of cartilage repair outcomes in patients implanted with ChondroMimetic on average 8 years ago
- Re-submission from CE Mark now expected late 2017
- Early partnership discussions underway

A full description and commercial opportunity for ChondroMimetic, which is expected to be COS' first proprietary product, was described in detail in our report dated 13th March 2017: '*Engineering cartilage repairs*'.

ChondroMimetic – A bi-layer implant

Top layer: chondral (cartilage like)
Bottom layer: Osseous (bone-like)



X-ray of product

Source: Orthomimetics Limited; Collagen Solutions

ChondroMimetic: a bi-layered, easy-to-use sponge, for repair of damaged cartilage

ChondroMimetic is best described as a clever bi-layered and easy-to-use sponge that allows the regeneration of cartilage where cartilage is supposed to be, and bone where bone is supposed to be. ChondroMimetic is for surgeons to repair knee cartilage damage thereby delaying the need for joint replacement.

Repair of articular cartilage is an unresolved global challenge. Because articular cartilage does not have a blood supply, damaged tissue rarely heals or regenerates spontaneously. Patients with articular cartilage lesions/damage typically receive conservative treatment that does not restore full function and does not prevent progression to osteoarthritis. The ultimate goal is to delay as far as possible the total joint replacement, which is estimated to cost a staggering $36bn p.a. worldwide.

ChondroMimetic open label extension

After ChondroMimetic originally received CE Mark in late 2008, a study was commissioned from a KOL in Hungary to implant patients with the product, with the results used to support marketing literature and repair claims. 17 patients were implanted with ChondroMimetic and the outcomes were assessed after six months. The results were extremely good and there was evidence of the bio-degradable scaffold being filled with natural hyaline-like cartilage.

Open-label extension study for ChondroMimetic initiated in 2017…

…to support CE mark re-submission

On 30th June 2017, COS initiated an open label extension of this study whereby 15 out of the original 17 patients have been contacted and scheduled to return to have the cartilage repair reassessed, generating data on average 8 years after the implant surgery, which will represent unparalleled depth of clinical knowledge on this subject. This study will be used to support the re-submission for CE Mark, the commercialisation material, and to attract commercial partners.

Although this study has started a few months later than originally planned, it is the direct result of a greater number of patients being contactable and willing to return for reassessment of the repair than expected. It also means that the data will be far more robust. The first scan has been completed and a regular schedule is expected to see the last patient scanned at the end of September 2017. Analysis of the data should be complete by the end of the year, allowing the re-submission for CE Mark.

Internal manufacturing

Meanwhile, COS has been developing in-house production capability for ChondroMimetic. Given Collagen's ability to source and functionalise relevant collagen and its fully operational clean room facilities, this is largely complete. Currently, manufacturing validation is being undertaken, after which the facility, processes, and documentation will be inspected by the Notified Body.

CE Mark

The main risk at present is that Notified Bodies have a heavy schedule following the introduction of a new European Medical Device Directive that has caused a significant backlog. COS has attempted to mitigate this risk by re-engaging with the original Notified Body used to obtain CE Mark in 2008.

Partnering

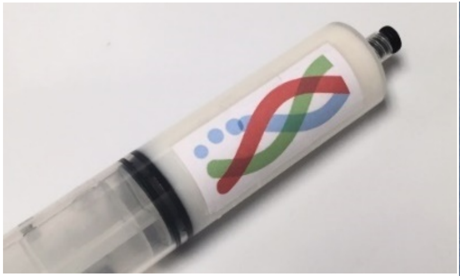
Preliminary discussions with a number of potential commercial partners have already taken place. Management has stated that, in an ideal world, such a partner would be a global multi-national with the financial resources to fund the PMA trials for the US market. However, its near term priority is to secure a partner that will be ready to launch in Europe as soon as practically possible following CE Mark certification.

Fibrillar collagen – wound care

Pre-clinical trials of Fibrillar collagen system planned for 2018

The second of COS's proprietary products is a pre-prepared fibrillar collagen for use in wound care and burns. The key advantage over existing commercialised products is that COS's fibrillar collagen will be supplied as a syringe, pre-filled with a consistent pre-mixed preparation, ready for use. The company arrived at this system after discussions with surgeons and liaising with industry experts. Management believes that this product could address about 40% of the current $1bn fibrillar collagen market. This design of this product is currently being optimised with the aim of launching it at the end of 2018/early 2019.

Fibrillar collagen



Pre-prepared syringe

Easy to use

Source: Collagen Solutions

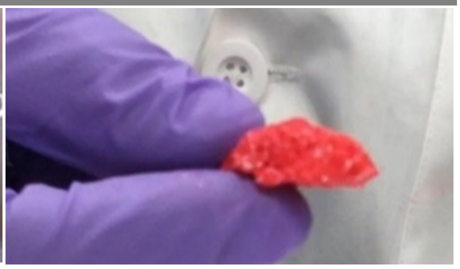
- Manufacturing process for the material has been established
- The pathway for 510(k) and CE Mark has been identified
- Regulatory and data collection strategy being defined
- Packaging and delivery systems under development
- Ready for pre-clinical trials in early 2018

Bone graft substitute

The market for bone graft substitutes is well established and valued at ca.$1.7bn. Despite this there are distinct disadvantages with some of the leading products and COS aims to address these and enter the market with a highly differentiated offering, which would likely become the company's third proprietary product. Management is aiming to commence pre-clinical trials later this year with a view to having regulatory approval by mid-2019.

Bone graft substitute

Scaffold rehydrated with blood



Shaped ready for implantation

Source: Collagen Solutions

At present, the bone graft market is split between low cost ceramics derived from cadaver bones and high cost biosynthetic preparations. Having discussed current offerings with surgeons and industry experts, one of the key messages involves the poor 'handling characteristics' of the products – in general they are too liquid/runny to be handled efficiently. Management believes its knowledge and expertise in the characteristics of collagen will enable it to produce a bone graft scaffold that has a low collagen content, that can be readily hydrated, manipulated and cut to size, in readiness for implantation.

- Aiming to overcome some of the disadvantages of existing products
- Cost effective – aiming to sit between the price bands of the two existing types of product
- Patent filed in December 2016
- Pre-clinical trials due to start late 2017
- Regulatory approval targeted for mid-2019

R&D update

Intellectual property

Australia patent granted

The Australian Patent Office has granted COS a divisional patent that covers the use of ultra-thin processed pericardium material.

US patent application

A provisional patent application has been submitted in the US to cover novel, proprietary properties of a Bone Graft Substitute formulation. These include superior handling properties and inorganic particle retention, which combine to keep the substitute at the operating site and aid use by surgeons.

Grant funding

Horizon 20-20 research programmes

In the last financial year, Collagen Solutions was part of a consortium that won a research grant from the European Commission. COS has received a Horizon 2020 grant (€500K) for the development of collagen scaffolds for therapeutic use in cell-based tissue regeneration. This is the second Horizon 2020 grant to be awarded to COS.

Outlook

The company has restated its 2018 strategy, with specific initiatives aligned to its existing 'strategic pillars':

2018 strategic plan

Strategic pillar	Initiative
Customers	Identify & attain further high value customers
Our People	Implement employee-driven Individual Development Plan
Products and capabilities	Secure and create stronger pericardium business
Growth	Successfully develop and partner three key proprietary products

Source: Hardman & Co Life Sciences Research

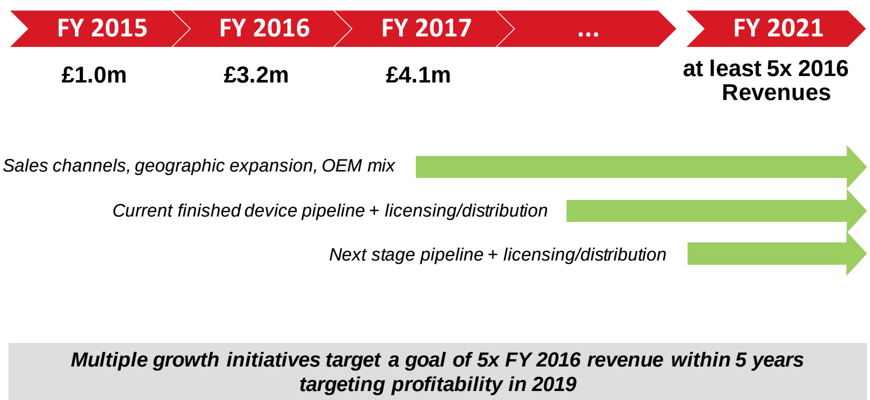
News flow

- **US consolidation:** California R&D function is being relocated to Minneapolis facilities; aim to increase efficiency, effectiveness, and operational cost savings
- **ChondroMimetic:** Completion of the follow-up study and data analysis that will allow the re- submission of ChondroMimetic and launch by end of end of fiscal 2018
- **Finished devices:** Pre-clinical development of Fibrillar Wound Care and Bone Graft Substitute are expected to be completed

Multiple growth drivers

Considerable progress has been made in fiscal 2017 in transitioning to an accelerated growth strategy and in reinforcing COS's quality product. Although there is considerable focus on the company's development of high value added proprietary devices, in terms of contribution over the forecast period, sales from this area are only expected to represent about one-third of group sales, the other two-thirds coming from existing products, new initiatives and expanding sales channels.

Multiple growth drivers



Source: Hardman & Co Life Sciences Research

Financial analysis

Profit & Loss

To provide a better understanding of underlying performance, all forecasts are on a constant currency basis at this early stage of the financial year

- **Sales:** Continued strong growth, benefiting from investment in marketing infrastructure, which has resulted in several new commercial contracts
- **Gross margin:** Is expected to improve when higher value-added devices reach commercialisation
- **R&D:** Continued planned investment in R&D, however, not all of this will be recognised through the P&L, with some costs being capitalised

Profit & Loss account

Year end March (£000)	2015	2016	2017	2018E	2019E	2020E
GBP:USD	1.57	1.46	1.31	1.31	1.31	1.31
GBP:EUR	1.29	1.31	1.19	1.19	1.19	1.19
GBP:NZD	1.95	2.03	1.84	1.84	1.84	1.84
Sales	**973**	**3,130**	**3,946**	**5,200**	**7,230**	**9,785**
Cost of goods sold	-214	-811	-984	-1,302	-1,771	-2,393
Gross profit	**759**	**2,319**	**2,962**	**3,899**	**5,458**	**7,393**
Gross margin	78.0%	74.1%	75.1%	75.0%	75.5%	75.6%
Admin expenses	-1,106	-2,107	-3,003	-3,172	-3,326	-3,523
Selling & marketing	-219	-333	-719	-1,093	-1,265	-1,370
R&D	-160	-367	-594	-954	-1,013	-1,072
Other income/grants	63	114	145	150	175	175
Underlying EBITDA	**-663**	**-374**	**-1,209**	**-1,170**	**30**	**1,603**
Depreciation	-75	-175	-234	-350	-350	-350
Amortisation	-55	-172	-215	-360	-380	-400
Underlying EBIT	**-793**	**-721**	**-1,658**	**-1,880**	**-701**	**853**
Share based costs	-27	-36	-51	-100	-100	-100
Exceptional items	-155	152	227	0	0	0
Statutory EBIT	**-975**	**-604**	**-1,482**	**-1,980**	**-801**	**753**
Net financials	-128	-262	-132	-260	-330	-188
Underlying pre-tax	-920	-983	-1,790	-2,141	-1,030	665
Exceptional items	0	0	0	0	0	0
Reported pre-tax	**-1,102**	**-866**	**-1,614**	**-2,241**	**-1,130**	**565**
Tax liability/credit	-21	-114	-142	-185	-231	-288
Underlying net income	**-942**	**-1,097**	**-1,932**	**-2,325**	**-1,261**	**377**
Statutory net income	-1,123	-980	-1,756	-2,425	-1,361	277
Ordinary shares:						
Period-end (m)	171.0	171.4	324.3	332.5	332.5	332.5
Weighted average (m)	96.4	171.2	185.8	325.0	332.5	332.5
Fully diluted (m)	102.3	180.4	203.8	343.0	350.5	350.5
Underlying Basic EPS (p)	**-0.98**	**-0.64**	**-1.04**	**-0.72**	**-0.38**	**0.11**
Statutory basic EPS (p)	-1.17	-0.57	-0.95	-0.75	-0.41	0.08
U/I Fully-diluted EPS (p)	**-0.98**	**-0.64**	**-1.04**	**-0.72**	**-0.38**	**0.11**
Stat. fully-diluted EPS (p)	-1.17	-0.57	-0.95	-0.75	-0.41	0.08
DPS (p)	0.00	0.00	0.00	0.00	0.00	0.00

Source: Hardman & Co Life Sciences Research

Balance sheet

- **Net cash/debt** – At 31st March 2017 net cash was +£7.1m, comprising a cash balance of £9.0m and debt of -£1.9m.
- **Norgine facility:** £2m was drawn down in fiscal 2017 and two further trances of £1m are available, conditional on the achievement of certain sales targets. It is expected that these will be drawn down during the course of fiscal 2018
- **Provisions:** There is a financial liability in the balance sheet in relation to New Zealand and US earn-outs

Balance sheet

@ 31st March (£000)	**2015**	**2016**	**2017**	**2018E**	**2019E**	**2020E**
Shareholders' funds	12,853	13,896	20,286	18,861	17,500	17,777
Cumulated goodwill	0	0	0	0	0	0
Total equity	12,853	13,896	20,286	18,861	17,500	17,777
Share capital	1,755	1,759	3,288	3,368	3,448	3,528
Reserves	11,099	12,137	16,998	15,493	14,052	14,249
Provisions/liabilities	4,320	2,437	2,350	1,150	-59	-59
Deferred tax	285	253	222	166	125	94
Long-term loans	88	63	26	1,906	686	0
Short-term debt	22	46	1,880	1,880	1,880	841
less: Cash	3,391	2,493	8,978	7,258	3,004	333
less: Deposits	0	0	0	0	0	0
less: Long-term invests.	0	0	0	0	0	0
Invested capital	**14,176**	**14,203**	**15,786**	**16,706**	**17,127**	**18,320**
Fixed assets	794	1,161	1,143	1,087	937	797
Intangible assets	12,919	12,971	14,582	15,422	16,251	15,851
Inventories	219	264	313	413	574	777
Trade debtors	*419*	*429*	*541*	*713*	*991*	*1,341*
Other debtors	*226*	*207*	*266*	*266*	*266*	*266*
Tax liability/credit	*-40*	*0*	*-59*	*-142*	*-185*	*-231*
Trade creditors	*-215*	*-694*	*-690*	*-748*	*-1,018*	*-1,375*
Other creditors	*-144*	*-135*	*-310*	*-305*	*-689*	*-606*
Debtors less creditors	245	-193	-252	-216	-634	-605
Invested capital	**14,176**	**14,203**	**15,786**	**16,706**	**17,127**	**18,320**
Net cash/(debt)	**3,282**	**2,384**	**7,072**	**3,471**	**438**	**-508**

Source: Hardman & Co Life Sciences Research

Cashflow

- Changes to our P&L account have a direct impact on cashflow forecasts, coupled with the translational effects of sterling weakness. Currencies used in our forecast are clearly stated at the top of the P&L account
- **Cap-ex** – At some point in the near future, COS will need to invest in a new freeze-dryer for the manufacture of ChondroMimetic and the related family of products. While management does have various (cheaper) options, we would expect it to take a long-term view and invest in a large top-end model. The costs of this would be around $250k. However, COS's existing equipment is more than adequate for the technology transfer and to re-gain CE Mark. Therefore, this expenditure is expected to be incurred in fiscal 2019
- **Loan facility** – Forecasts have been adjusted to reflect both the drawdown and repayment of the loan facility from Norgine Ventures. For each tranche, after an initial interest only period, COS will start capital repayments through equal monthly instalments, such that the whole tranche is paid off within 42 months of the date of drawdown. An additional line has been added into the following table to indicate clearly the cash outflow for these capital repayments

Cashflow

Year end March (£000)	2015	2016	2017	2018E	2019E	2020E
Underlying EBIT	**-793**	**-721**	**-1,658**	**-1,880**	**-701**	**853**
Depreciation	75	175	234	350	350	350
Amortisation	55	172	215	360	380	400
Inventories	*-123*	*-48*	*-54*	*-100*	*-161*	*-203*
Receivables	*-195*	*-10*	*-213*	*-172*	*-278*	*-350*
Payables	*90*	*479*	*191*	*58*	*270*	*357*
Change in working capital	-105	469	-76	-114	-8	7
Exceptionals/provisions	-155	152	0	0	0	0
Other (Fx)	-106	-346	34	-200	250	0
Net cash used in ops.	**-1,152**	**-147**	**-1,250**	**-1,584**	**110**	**1,407**
Net interest	-2	2	3	-260	-330	-188
Loan repayments	0	0	0	-120	-1,220	-1,725
Tax paid/received	-26	-194	-105	-142	-185	-231
Operational cashflow	**-1,180**	**-338**	**-1,360**	**-2,106**	**-1,624**	**-736**
Capital expenditure	-159	-464	-137	-294	-200	-210
Sale of fixed assets	13	1	0	0	0	0
Free cashflow	**-1,326**	**-801**	**-1,497**	**-2,400**	**-1,824**	**-946**
Dividends	0	0	0	0	0	0
Acquisitions	-2,192	-207	-342	-2,200	-1,209	0
Other investments	-127	-93	0	0	0	0
Cashflow after invests.	**-3,645**	**-1,101**	**-1,838**	**-4,600**	**-3,033**	**-946**
Share issues	5,422	207	6,462	1,000	0	0
Currency effect	12	-18	63	0	0	0
Change in net debt	**1,790**	**-898**	**4,687**	**-3,600**	**-3,033**	**-946**
Hardman FCF/share (p)	-1.22	-0.20	-0.73	-0.65	-0.49	-0.22
Opening net cash	1,492	3,282	2,384	7,072	3,471	438
Closing net cash	**3,282**	**2,384**	**7,072**	**3,471**	**438**	**-508**

Source: Hardman & Co Life Sciences Research

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