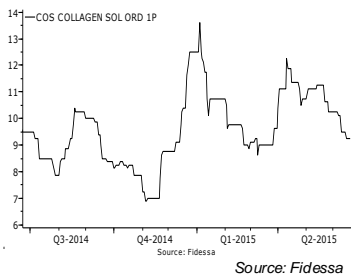


## Healthcare Equipment & Services



## Market data

Price (p)	9.25
12m High (p)	14.75
12 Low (p)	6.75
Shares (m)	171.0
Mkt Cap (£m)	15.8
EV (£m)	14.3
EPIC	COS
Free Float* (%)	78%
Market	AIM

\*As defined by AIM Rule 26

## Description

Collagen Solutions develops and manufactures medical grade collagen components for use in regenerative medicine, medical devices and in-vitro diagnostics.

## Company information

CEO	Stewart White
CFO	Gill Black
Chairman	David Evans

[www.collagen-solutions.com](http://www.collagen-solutions.com)

Tel 0141 558 9838

## Next event

Finals	Jul -15
AGM	Aug-15

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## Collagen Solutions plc (COS.L) Update

### Regenerative medicine partnership

Collagen Solutions announced that, together with The Electrospinning Company (private UK-based company), it has been selected as part of an Innovate UK grant award to develop a novel bio-synthetic surgical mesh for internal wound healing. Whilst of little financial relevance in the short term it illustrates the value and diversity of Collagen Solutions' technology and provides another example of the route to realising longer term commercial opportunities.

**Partnership works to utilise respective expertise:** Under the terms of the grant Collagen Solutions will provide The Electrospinning Company with purified soluble collagen to create a composite polymer/collagen sheet with Electrospinning creating a 3D scaffold that resembles a natural extracellular matrix. The aim is to combine the benefits of synthetic polymers (eg. flexibility, strength and batch to batch consistency) with the bio-performance benefits of collagen, such as providing cell recognition sites for cell adhesion, proliferation and ultimately improved tissue regeneration at wound sites.

**Customer wins:** Not all client contracts are notifiable for reasons of confidentiality. However, this grant award provides further evidence of the momentum within the business to build external supply and development and follows the announcement with NovaBone (USA) in April 2015, Globus Medical (USA) in January and KYERON (Holland) and Desu Medical (Turkey), both in December 2014.

**Valuation:** We have made no changes to our forecasts as a result of this announcement and our DCF valuation remains unchanged. Based on the forecast cashflows to 2018, projected cashflows thereafter to 2020 and a 2% terminal growth rate, a DCF value of £60m (32p per share) is indicated. As visibility to contracts improves so too are forecasts likely to be underpinned/rise, with the full value of the technology platforms increasingly being reflected in the share price.

**Risks:** Integration of SLB, seemingly on track; timing of development and manufacturing contracts, supply agreements, regulatory delays, all of which have contributed to the above sales shortfall in 2014/15; potential competition from alternate biomaterials.

**Investment summary:** Collagen Solutions continues to broaden and deepen its relations with external partners. This award provides another example of the type of partnership that, in our view, adds to the incremental value of the business. The Board's stated objective remains unchanged: creating a business worth c.£100m by 2020.

### Financial Summary and Valuation

Year end Mar (£,000s)	FY 14	FY 15E	FY 16E	FY 17E	FY 18E
Sales	24	1,000	3,700	6,500	10,500
Underlying EBITDA	(364)	(763)	(273)	1,707	4,086
Reported EBIT	(480)	(991)	(768)	1,147	3,456
Underlying PTP	(381)	(939)	(701)	1,211	3,521
Statutory PTP	(480)	(989)	(751)	1,161	3,471
Underlying EPS (p)	(0.87)	(0.97)	(0.42)	0.52	1.43
Statutory EPS (p)	(1.10)	(1.03)	(0.45)	0.49	1.40
Net (debt)/cash	1,492	3,248	2,047	1,191	2,588
Shares issued	3,374	5,230	-	-	-
P/E (x)	-10.6	-9.5	-22.0	17.9	6.5
EV/sales (x)	603.9	14.5	3.9	2.2	1.4
EV/EBITDA (x)	-39.9	-19.0	-53.2	8.5	3.6

Source: Hardman & Co Life Sciences Research

## Partnership with The Electrospinning Company

*Part of a grant award  
from Innovate UK*

Collagen Solutions announced that, together with The Electrospinning Company (private UK-based company), it has been selected as part of an Innovate UK grant award, formerly named as the Technology Strategy Board, to develop a novel biosynthetic surgical mesh, combining the two companies' respective expertise.

*... supplying purified  
soluble collagen to  
create novel  
biosynthetic surgical  
mesh*

Under the terms of the grant Collagen Solutions will provide The Electrospinning Company with purified soluble collagen to create a composite polymer/collagen. Electrospinning will create a 3D scaffold that resembles natural extracellular matrix, the aim of which is to combine the benefits of synthetic polymers (eg. flexibility, strength and batch to batch consistency) with the bio-performance benefits of collagen, such as providing cell recognition sites for cell adhesion proliferation and ultimately improved tissue regeneration at wound sites.

*Addressable global  
market worth over \$1bn*

The global market for surgical meshes is estimated to worth more than \$1bn. Surgical mesh is a medical device used to provide additional support to weakened or damaged tissues. Surgical mesh made of synthetic materials can be found in knitted mesh or non-knitted sheet forms. The synthetic materials used can be absorbable, non-absorbable or a combination of absorbable and non-absorbable materials.

The majority of surgical mesh devices currently available for use are constructed from synthetic materials or animal tissue, either as a permanent or temporary support for organs and other tissues during surgery. The largest segment of the market is for hernia repair but they can also be used for reconstructive work; such as in pelvic organ prolapse (a protrusion of one or more pelvic organs - bladder, rectum, uterus, vaginal vault or bowel - through the vaginal fascia into the vagina and the downward displacement or 'prolapse' of the associated vaginal wall from its normal location to or outside the vaginal opening) and stress incontinence.

Non-absorbable mesh, used to provide permanent reinforcement to the repaired hernia, remain in the body indefinitely and is considered a permanent implant. Absorbable mesh will degrade and lose strength over time. However, as the material degrades, new tissue growth is intended to provide strength to the repair.

*This project aims to  
create a product that  
eliminates some of the  
drawbacks of existing  
surgical meshes*

The safety of surgical mesh has been the target of major media coverage over the past 5 years or so and has led to several lawsuits, with a number of product recalls issued by the US FDA. This was due to adverse reactions to the mesh, adhesions (when the loops of the intestines adhere to each other or the mesh), and injuries to nearby organs, nerves or blood vessels. Other complications of hernia repair have also included infection, chronic pain and hernia recurrence. The intention of this development project is to develop a novel bio-composite mesh without any of these drawbacks that will also promote rapid endogenous healing whilst also reducing the risk of rejection and infection.

*Not the first grant won  
by Electrospinning*

This is not the first grant funded project that the Electrospinning Company has won, illustrating the capabilities of the company's technology. Indeed, it has two other key grant funded projects to:

- develop a bio-artificial liver organoid (Re-Liver) for the treatment of severe metabolic liver diseases, such as haemophilia. A synthetic equivalent of the extracellular matrix is seeded with human autologous cells.
- develop a single-use bioreactor (HESUB), which integrates a porous electrospun scaffold optimised for the proliferation of human stem cells for therapeutic treatment of a range of diseases.

Amongst other projects, The Electrospinning Company has also supplied biodegradable synthetic membranes for affordable corneal surface regeneration techniques in collaboration with the University of Sheffield and surgeons in India.

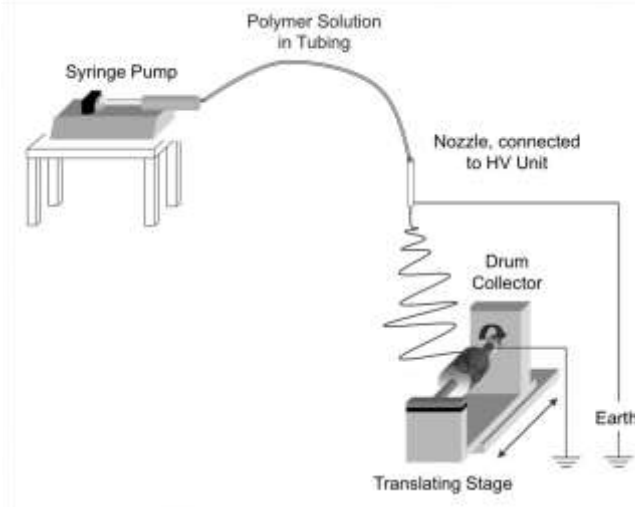
## Electrospinning technology

*Electrospinning is an established technology.....*

Electrospinning is an established method of producing nanofibres from a wide variety of natural and synthetic polymers. It uses an electrical charge to draw very fine fibres from a liquid. In this case a polymer solution is injected at a constant feed rate through a nozzle which is charged to a high voltage (10 to 30 KV).

The applied voltage induces a charge on the surface of the liquid droplet which, when increased further, generates a charged liquid jet. This ejected liquid is attracted to the earthed collector, which is positioned at a fixed distance from the needle. During this process the solvent evaporates from the polymer solution, leaving dry polymer fibres on the collector.

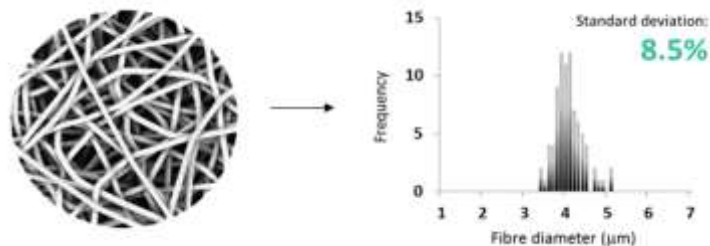
### The electrospinning process



Source: The Electrospinning Company

Electrospun scaffolds are designed to mimic the extracellular matrix in terms of its architecture. In doing so, the scaffold provides an ideal substrate for cell growth and differentiation which can be manufactured into an implantable medical device with FDA-approved medical grade polymers and formulated to degrade over a defined period *in vivo*. Batch-to-batch reproducibility and precise control of the important fibre parameters, such as diameter and surface texture, are key to ensuring a consistent product.

### Electrospun scaffold with consistent fibre diameter



Source: The Electrospinning Company

We have not adjusted our forecasts as a result of this announcement and our DCF valuation remains unchanged at c.£60m or 32p per fully diluted share.

DCF Valuation						
Year end March	2015	2016	2017	2018	2019	2020
£,000s						
Year	-	1	2	3	4	5
Free Cash Flow	(974)	(1,201)	553	2,397	3,596	4,675
		23%	-146%	334%	50%	30%
Discounted Cashflow	(974)	(1,081)	448	1,748	2,360	2,762
Discounted Cash Flow for Forecast Period (£,000)				6,238	11%	
Terminal Value (£,000)				51,374	89%	
<b>Total Enterprise Value (£,000)</b>				<b>57,611</b>	<b>100%</b>	
Net cash/(debt) in year 1 (£,000)				2,047		
<b>Implied market value (£,000)</b>				<b>59,658</b>		
Fully diluted shares (m)				187.0		
<b>Implied value per share (p)</b>				<b>32</b>		
WACC		<b>11.1%</b>	Risk-free Rate			2.5%
% of debt		0%	Market return			8.0%
% of Equity		100%	Market Risk			5.6%
Equity Beta		1.00				
Average Interest Rate		0.5%	Terminal Growth			2%
CAPM		11.1%				

Source: Hardman &amp; Co Life Sciences Research

Summary financials					
Year end Mar (£,000s)	FY 14	FY 15E	FY 16E	FY 17E	FY 18E
<b>Profit &amp; Loss Account</b>					
Sales	24	1,000	3,700	6,500	10,500
Gross Profit	12	772	2,903	5,032	8,086
Administrative expenses	(304)	(970)	(1,575)	(1,500)	(1,800)
Selling and marketing costs	(72)	(440)	(1,150)	(1,275)	(1,550)
R&D	-	(125)	(450)	(550)	(650)
<b>Underlying EBITDA</b>	<b>(364)</b>	<b>(763)</b>	<b>(273)</b>	<b>1,707</b>	<b>4,086</b>
<b>Underlying EBIT</b>	<b>(381)</b>	<b>(941)</b>	<b>(718)</b>	<b>1,197</b>	<b>3,506</b>
Share based costs	(25)	(50)	(50)	(50)	(50)
Statutory Operating profit	(480)	(991)	(768)	1,147	3,456
Net financial income	-	2	17	15	15
<b>Reported pre-tax</b>	<b>(480)</b>	<b>(989)</b>	<b>(751)</b>	<b>1,161</b>	<b>3,471</b>
Reported taxation	-	-	(18)	(323)	(854)
Underlying net income	(381)	(939)	(719)	888	2,666
Weighted average shares (m)	44	96	171	172	187
<b>Underlying Basic EPS (p)</b>	<b>(0.87)</b>	<b>(0.97)</b>	<b>(0.42)</b>	<b>0.52</b>	<b>1.43</b>
Statutory basic EPS (p)	(1.10)	(1.03)	(0.45)	0.49	1.40
<b>Balance Sheet</b>					
Share capital	683	1,755	1,835	1,915	1,915
Reserves	5,573	11,130	10,491	12,299	14,965
less: Cash	1,492	3,248	2,047	1,191	2,588
less: Non-current investments	(2,409)	(4,427)	(4,427)	(1,017)	(17)
<b>Invested capital</b>	<b>7,174</b>	<b>14,063</b>	<b>14,705</b>	<b>14,040</b>	<b>14,309</b>
<b>Cashflow</b>					
Operating profit	(381)	(941)	(718)	1,197	3,506
Working capital	(72)	(60)	(70)	(125)	(180)
<b>Operational cashflow</b>	<b>(525)</b>	<b>(871)</b>	<b>(476)</b>	<b>1,378</b>	<b>3,347</b>
Capital Expenditure	(0)	(115)	(725)	(825)	(950)
<b>Free cashflow</b>	<b>(525)</b>	<b>(974)</b>	<b>(1,201)</b>	<b>553</b>	<b>2,397</b>
Acquisitions	(1,357)	(2,500)	-	(1,409)	(1,000)
Share issues	3,374	5,230	-	-	-
<b>Change in net debt</b>	<b>1,492</b>	<b>1,756</b>	<b>(1,201)</b>	<b>(856)</b>	<b>1,397</b>

Source: Collagen Solutions; Hardman &amp; Co Life Sciences forecasts

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