

2 September 2008

## Asterand

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	PE (x)	Yield (%)
12/06	7.5	(2.2)	(2.1)	0.0	N/A	N/A
12/07	7.6	(1.3)	(1.4)	0.0	N/A	N/A
12/08e	14.0	3.2	3.0	0.0	4.4	N/A
12/09e	12.7	1.1	1.1	0.0	12.0	N/A

Note: \*PBT and EPS are normalised, excluding goodwill amortisation and exceptional items.

### Investment summary: Eye deal unlocks value

Asterand's licensing deal with Allergan for a programme targeting ocular diseases has unlocked value from a legacy, non-core asset that until now had not featured in our valuation model. We view the \$6.25m signing fee Allergan has paid Asterand as high for a project still in early preclinical development. The deal has taken some attention away from Asterand's first-half results, which show near profitability and indicate that management is turning the company around.

### Management delivering on promises

Asterand's transformation and positioning for growth in an expanding market have been driven by a revamped senior management team, which is building credibility and delivering on promises made a year ago.

### Core business turnaround

A fact investors should not overlook is that Asterand's core business remains on track to hit profitability this year. First-half results have shown a strong turnaround, with 43% sales growth, a significant increase in gross margins following a restructuring effort, and profitability on an EBITDA basis. £700k in annualised cost savings has been realised without affecting the UK division's core service offering.

### Allergan cash boost

The Allergan deal and sharp increase in revenue provide the strongest sign so far that Asterand has been repositioned, and we believe that the company could now seek to grow through acquisitions. The new CEO, Martyn Coombs, is proving to be a safe pair of hands, having revamped the board and sales team, made steps to improve the supply chain as well as defending a takeover bid.

### Valuation increased to around £25m

Following the Allergan deal, we have revised our valuation methodology, adding to our earlier DCF model a risk-adjusted net present valuation of future revenue streams that Asterand stands to receive from Allergan. This has had the effect of raising our base case valuation for Asterand to around £25m – a greater than twofold upside over the firm's enterprise value of around £12m.

*Asterand is a research client of Edison Investment Research Limited*

Price 13.25p  
Market Cap £15m

#### Share price graph



#### Share details

Code ATD  
Listing FULL  
Sector Pharmaceuticals & Biotechnology  
Shares in issue 110m

#### Price

52-week High 15.75p Low 4.13p

#### Balance Sheet as at 30 June 2008

Debt/Equity (%) N/A  
NAV per share (p) 5.4  
Net cash (£m) 1.6

#### Business

Asterand supplies human tissue and tissue-related products as well as tissue testing-based services to R&D companies, many of them big pharmas. It was formed in January 2006 through the reverse takeover of the UK's Pharmagene by the private US firm Asterand.

#### Valuation

	2007	2008e	2009e
P/E relative	N/A	45%	136%
P/CF	N/A	5.3	10.5
EV/Sales	1.6	0.7	0.7
ROE	N/A	37%	12%

#### Geography based on revenues

UK	Europe	US	Other
4%	13%	80%	3%

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## Investment summary: Allergan deal – first stage of unlocking hidden value

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**Asterand's agreement with Allergan for a programme targeting ocular diseases unlocks value from a legacy, non-core asset that until now had not featured in our valuation model. The Allergan deal gives an indication of the assets that the company contains, with management believing that more value could be unlocked in future.**

The ocular disease programme, coded R99, was one of several IP assets that Asterand had inherited from Pharmagene, but on which it was no longer focusing. Asterand's IP portfolio contains several such non-core assets (one is licensed to BTG and last year entered Phase I studies for treating migraine), at least one with existing Phase I data, and these could provide future upside to our valuation case if they are licensed to partners for development.

Under the deal covering R99, Allergan has paid Asterand a one-off amount of \$6.25m in cash – we note that this appears to be a relatively high sum for a project still at the early stages of preclinical development. The headline value of the deal amounts to \$56m in up-front and milestone payments in addition to a royalty on sales, with what we believe to be more than half of the total being weighted towards post-approval milestones.

### **Deal limited to eye conditions**

Allergan has licensed rights to the R99 programme solely for ocular conditions (such as glaucoma), and is to take on all future costs of developing it. This means that there remains the possibility of either licensing it to another company for additional indications, or – more realistically in our view – licensing additional rights to Allergan to expand targeted indications for development.

The only cost related to the project that will be booked by Asterand will relate to soliciting offers for the licensing deal, including legal fees, and we estimate this to amount to around £400k. The deal follows what we believe to have been over a year of discussions and an exhaustive due diligence process. The R99 programme focuses on a series of small-molecule prostaglandin EP2 agonists that in preclinical studies have demonstrated efficacy, having been shown to reduce intra-ocular pressure. Allergan plans to conduct further preclinical work, including toxicology, aiming to identify a lead to take into the clinic.

### **Future payments**

Asterand has received \$6.25m as a straight up-front cash payment from Allergan. The schedule of the remaining \$50m of milestone payments has not been disclosed, but we would expect more than half to be payable post-approval, ie dependent on a resulting marketed product reaching predefined sales targets.

As far as the pre-approval milestones are concerned, we would assume that these follow a typical pattern of being triggered by entry into each phase of clinical development followed by filing or approval, with the value of each payment increasing the closer the project is to market launch. To update our valuation model for Asterand, we have made a series of assumptions about the level of these payments and the probability of each being achieved.

## Core business: Human tissue/services supplier

As a specialist provider of human tissue samples and associated services, Asterand offers customer companies years of expertise in this highly fragmented market, having the advantage of a large tissue biobank and an extensive tissue procurement network. Its investment case relies on it growing its market share before turning to possible acquisitions, having been put on track to operating profitably at the half-year point. The current market is highly fragmented but growing fast, fuelled by big pharma's drive to cut drug development times and increase R&D productivity, as well as a growing focus on biomarkers.

Asterand operates a profitable tissue sample supply business in the US, and a UK CRO/service offering carrying out studies for client companies (see Exhibit 1).

**Exhibit 1: Asterand's business offering**

"Product"	Description	Business unit	Location
XpressBANK	Biobank of over 200,000 tissue samples and associated clinical and pathology data. Available fixed (in paraffin blocks) or flash-frozen in nitrogen; or as Quad Sets (matched pairs of diseased and adjacent normal tissue; see below). Blood, sputum and tissue derivatives (RNA, DNA, cell lines, etc) also available.	Tissue products	Detroit, Michigan
ProCURE	An on-demand service for clients wanting samples not currently in Asterand's biobank. Asterand effectively uses its network to procure the desired tissue.	Tissue products	Detroit, Michigan
Target validation	CRO service comprising gene expression and gene and protein localisation work focusing on identifying where targets are expressed in tissue/disease types.	PhaseZERO service	Royston, UK
Compound profiling	CRO service dealing with work on live tissues/live cells. Involves investigating drug candidates' pharmacology, looking at mechanical responses in whole tissue preparations or biochemical responses in isolated cells or fractions.	PhaseZERO service	Royston, UK
ADMET	CRO work on drug metabolism, absorption and interaction, <i>in vitro</i> toxicity and safety pharmacology.	PhaseZERO service	Royston, UK

Source: Company presentation; Edison Investment Research

## Management revamp

The business transformation is being driven by Asterand's new management team, which should provide reassurance that legacy issues regarding management and strategy are being put to rest. The last non-executive director from before 2007 has just been replaced, and the current board has been strengthened with the addition of directors with experience in such companies as Pharmacia & Upjohn, PerkinElmer, Stemgent and the Allegro Group.

Recently announced appointments to the board of directors comprise Jonathan Fleming (currently managing partner of Oxford Bioscience Partners), Jill Force (a partner with the Allegro Group), Robert Salisbury (more than 20 years in pharma, most importantly as chief financial officer of Pharmacia & Upjohn), Ian Ratcliffe (currently president and CEO of Stemgent) and Dr Peter Coggins (35 years in biotechnology and the life sciences, including at PerkinElmer). This means that Asterand's board has been completely revamped, with all non-executive directors being replaced. Asterand is led by Martyn Coombs, CEO appointed in 2007, and John Stchur (chief financial officer, promoted to the position last year), and also has a new chairman (Jack Davis).

New management has positioned Asterand for profitability, revamped the board and sales team, made steps to improve the supply chain and realised significant value from a moribund IP asset as well as defending a takeover bid.

## Core business moving to profitability

This combined core business has been turned around, having been restructured by Asterand's new management team and positioned for profitability. The Allergan deal has taken some attention away from the fact that Asterand's first-half results have shown the first strong signs that the business is on track to operating profitably – including 43% topline growth and near profitability vs last year's losses – and this key fact should not be overlooked by investors.

In particular, the US-based tissue-supply business has continued to operate strongly, with continued demand for human tissue and tissue-based services in research remaining strong despite adverse market conditions for companies more exposed to typical economic cycles. The UK CRO activities have been restructured, with costs having been cut by an annualised £700k, and the full year is likely to show a better indication of how this realignment is progressing. Six of nine sales representatives have been replaced, strengthening Asterand's commercialisation effort.

First-half figures showed almost breakeven on an operating basis (operating loss of £72k compared with a £1.1m loss a year ago), although the company was profitable on an EBITDA basis (£80k profit vs an £800k loss a year ago). We note that Asterand has historically performed better in the second vs the first half of the financial year – nevertheless H108 revenue is 25% higher than H207. Accordingly we are comfortable in maintaining the view that it will report a full-year net profit even before the Allergan payment is factored in.

First-half sales rose by 43% to £5.1m, including around £750k in revenue under Asterand's deal with the US Department of Defense for assessment of the Armed Forces Institute of Pathology biorepository (we have amended the timing of the receipt of the £300k balance of this, which is now expected in Q109). Gross margins improved strongly from 39% a year ago to 51%. The results were broadly in line with our projections, with gross margins ahead and operational spend slightly above our forecasts. Accordingly, we are keeping forecasts for the core business unchanged, but have added to our model the \$6.25m up-front payment from Allergan, and have assumed that this will be booked in full on the second-half income statement.

Whether it is recognised in full or spread over a longer period of time, the effect will be a direct boost to Asterand's cash balance, which stood at £1.6m at the half year, but which we expect to rise to around £4.6m at the end of 2008. The company has an additional £2m credit facility available.

Our financial model, which does not include future possible IP licensing deals, is presented in Exhibit 4.

## Additional IP assets

Following the deal with Allergan, we have taken a more in-depth look at the legacy IP assets to which Asterand retains rights. Any of these that are not already licensed (ie to BTG or Allergan) could bring additional revenue for Asterand at relatively little or no cost, and such future scenarios are not factored into our financial model or valuation for Asterand.

Our research has identified nine discrete potential development projects in total, and we have summarised these in Exhibit 2. However, it should be noted that several of these might have been formally discontinued following initial trials, and therefore stand little chance of being licensed in by a partner. Asterand could now put increased effort into realising the value of its IP programmes, including seeking licensing deals with other pharmaceutical companies. Meanwhile, it intends to maintain focus on its core business of supplying human tissue and related services.

**Exhibit 2: Asterand's IP assets**

Project	Development stage	Licensed to	Notes
R1 (5HT2B antagonists for IBS)	Phase I	none	An initial lead, PGN1164, underwent Phase I testing for IBS but was discontinued after showing highly variable blood levels. Possible further work on back-up compounds.
R4 (prostaglandin EP4 antagonists for migraine)	Phase I	BTG	BTG took a lead compound, BGC20-1531, into Phase I development for treating migraine in 2007, resulting in the payment of £250k to Asterand.
R52 (human synthetic secretins)	Phase I	none	Development for cystic fibrosis of a lead, PGN0052, was discontinued after a Phase IIa study showed no clinical improvement. Potential in asthma/respiratory disorders.
R65 (prostaglandin EP2 agonists for myometrial disorders, COPD, inflammation etc)	preclinical	none	Patent filings focused on one selective prostanoid receptor agonist, PGN1473. This compound has shown potency and a long half-life, and is ready to progress into full preclinical development for several indications.
R99 (prostaglandin EP2 agonists for multiple indications including glaucoma)	preclinical	Allergan (for ocular uses only)	Non-prostanoid molecules with potential for systemic use. Possible uses include inflammation and immune modulation, and the molecules are ready to progress to full preclinical development. Allergan deal signed 26 August 2008.
R101 (CGRP antagonists)	research	none	Programme focused on migraine, seeking to identify active molecules against a proven but novel target in this indication.
R111 (prostaglandin EP2/EP4 agonists)	research	none	Potential in treating bone disorders.
R108 (prostaglandin EP2/EP4 antagonists)	research	none	Programme focused on molecules for treating a range of cancers, based on an established and validated target.
R93	target validation	none	Therapeutic protein for treating heart failure.

Source: Edison Investment Research and Pharmagene/Asterand merger document

Allergan has gained rights to the R99 programme – a series of prostaglandin EP2 agonists – limited specifically to ocular disease indications such as glaucoma. Prostaglandins exert a range of effects on the human body, and these actions are mediated through a variety of receptors. The EP2 receptor mediates a number of actions with potential therapeutic application, including inhibition of uterine contractility (possible application in treating uterine motility disorders such as preterm labour and dysmenorrhoea) and lowering intra-ocular pressure (potential in treating glaucoma). Asterand's IP position in the broad prostaglandin field comprises patents filed on PGN1473, a novel prostaglandin EP2 agonist that Asterand believes to be suitable for administration topically in high doses. PGN1473 has demonstrated relatively potent activity and long half-life, but this appears to be eliminated rapidly when absorbed systemically. The last is an important point, given that EP2

receptors are widely distributed throughout the body, and there is therefore the possibility of side-effects even for topically applied drugs, for which high doses are required and which can result in systemic absorption.

Accordingly, PGN1473 could be administered by two different routes for the two indications: by intra-uterine device for preventing/delaying preterm labour (without causing side-effects in the mother or foetus), and by high-dose eye drops to treat glaucoma, lowering intra-ocular pressure without associated non-ocular side-effects. The R99 programme has undergone lead optimisation and preclinical efficacy testing – demonstrating an ability to lower intra-ocular pressure – and we expect Allergan to undertake additional preclinical studies before identifying a lead to progress to Phase I trials.

## **Eolas deal**

In June 2008, Asterand signed a deal appointing Eolas Biosciences to represent its biospecimens and human-tissue-based research services to pharmaceutical and biotechnology companies in Japan. Eolas is effectively a consultancy that supports and guides biopharmaceutical companies in accelerating the progression of their business activities in Japan, a market with whose particular workings many Western companies are unfamiliar. Asterand says it has begun to experience an improvement in sales to Japan, which is viewed as an important market for expanding its business, but which has historically proved particularly difficult to penetrate.

## **Consortium bid approach and other sensitivities**

In May 2007, Asterand received a takeover approach from a consortium of its investors, and after due diligence, this bid was increased to a level that management potentially found acceptable; however, it then became apparent that the consortium was unable to make a proposal that would lead to an offer, and after being issued with an ultimatum under the UK takeover code, it agreed to withdraw from bidding for six months.

This six-month period has now expired, although there has been no indication that further disruptions of this sort are imminent, and the company says all the shareholders involved in the consortium have maintained their equity stakes and continue to support current management strategy. Given that Asterand's share price has recovered strongly in light of the Allergan deal and the turnaround evident in the first-half results — having previously suffered in the general adverse market environment for healthcare-related stocks — we view this sensitivity for Asterand to have been reduced, at least in the near term.

Further sensitivities to our forecasts – both on the upside and the downside – include tissue supply bans in Russia and other relatively unstable countries, although Asterand is working to broaden and diversify its procurement network. Asterand's revenue growth strategy depends on increased take-up and acceptance from big pharma. The sale of remaining Pharmagene IP could provide further upside and potential payments under any further licensing deals for Asterand's non-core IP are not factored into the current financial model. Our forecasts for sales of a drug arising out of the Allergan deal depend on strong market penetration against likely competitors such as Pfizer.

## Valuation

In our initiation note published in February 2008, we spelled out the fact that Asterand held rights to a portfolio of legacy IP assets that it was not developing, but which it was looking to license out to interested partners. Our valuation related solely to Asterand's core business in the supply of human tissue and related services, and we stressed that any licensing deals would unlock upside above that reflected in the DCF valuation.

The basic assumptions we are currently using to calculate a DCF valuation of Asterand's core business remain unchanged, and comprise financial forecasts taken out to 2013 that assume that, by that time, it has reached steady state. The terminal value of the business in that year is added to the net present value of the discounted cash flows for earlier years. There are a number of variables in this, most significantly the growth of the business at steady state and the discount rate used. However, taking a relatively harsh view and applying a 12.5% discount rate (and 5% steady-state growth rate) values the core business at around £19m.

Following the Allergan deal, we have revisited the valuation methodology, adding to the above basic DCF model a risk-adjusted net present valuation of future revenue streams (in terms of milestone payments and royalties on Allergan's sales) that Asterand stands to receive. This has had the effect of raising our base case valuation for Asterand by around £5m to £25m – a greater than twofold upside compared with Asterand's current enterprise value of around £12m.

To add the value of the Allergan deal to the core business, we have estimated the size of the milestone payments and royalties due to Asterand at each stage of the product's development, risk-adjusted them at each point and discounted them back to their NPV.

Our assumptions here include the following: entry into Phase I in 2010 (95% probability); Phase II in 2012 (75% probability); Phase III in 2015 (45% probability); launch in 2019 (5% probability); and peak sales of £1.5bn, with Asterand collecting a low- to mid-single-digit royalty. The key sensitivity in the rNPV analysis is the probability of a lead product being launched and generating significant sales – we have set this at 5%, in line with industry-standard averages for a product still at the preclinical stage of development.

Furthermore, the combined valuation model depends on the discount rate used, and accordingly we are presenting a valuation matrix considering a range of discount rates and assumptions for the terminal growth rate. We present this in Exhibit 3, and note that this suggests a value of around £25m if a mid-case scenario is considered.

### Exhibit 3: Asterand valuation matrix

Note: Assumes terminal growth is reached in 2013; \*weighted average cost of capital.

WACC*	10%	12.5%	15%
Terminal growth rate			
3%	£28.1	£19.6	£14.5
5%	£37.1	£23.6	£16.7
7%	£58.1	£30.6	£20.0

Source: Edison Investment Research

**Exhibit 4: Asterand financial forecasts**

Note: In 2005 Asterand Inc and Pharmagene existed as separate entities, and their figures have been combined below. 2006 cash flow shows merger and Pharmagene cash under financing.

Year end 31 December	£'000s	2005 (combined)	2006 IFRS	2007 IFRS	2008e IFRS	2009e IFRS
<b>PROFIT &amp; LOSS</b>						
<b>Revenue</b>		<b>5,630</b>	<b>7,535</b>	<b>7,608</b>	<b>14,013</b>	<b>12,740</b>
Cost of sales		(3,480)	(4,030)	(4,112)	(6,107)	(6,900)
Gross profit		2,150	3,505	3,496	7,906	5,840
<b>EBITDA</b>		<b>(6,827)</b>	<b>(1,912)</b>	<b>(1,214)</b>	<b>3,468</b>	<b>1,382</b>
<b>Operating profit (before GW and except.)</b>		<b>(7,371)</b>	<b>(2,457)</b>	<b>(1,597)</b>	<b>3,236</b>	<b>1,132</b>
Goodwill amortisation		0	0	(14)	(14)	0
Exceptionals		(2,369)	(463)	(570)	0	0
Other		40	36	108	(70)	(100)
<b>Operating profit</b>		<b>(9,700)</b>	<b>(2,884)</b>	<b>(2,073)</b>	<b>3,152</b>	<b>1,032</b>
Net interest		536	225	150	65	100
<b>Profit before tax (norm)</b>		<b>(8,795)</b>	<b>(2,196)</b>	<b>(1,339)</b>	<b>3,231</b>	<b>1,132</b>
<b>Profit before tax (FRS 3)</b>		<b>(9,164)</b>	<b>(2,659)</b>	<b>(1,923)</b>	<b>3,217</b>	<b>1,132</b>
Tax		401	187	(24)	(15)	(25)
<b>Profit after tax (norm)</b>		<b>(6,434)</b>	<b>(2,045)</b>	<b>(1,471)</b>	<b>3,286</b>	<b>1,207</b>
<b>Profit after tax (FRS3)</b>		<b>(8,763)</b>	<b>(2,472)</b>	<b>(1,947)</b>	<b>3,202</b>	<b>1,107</b>
Average number of shares outstanding (m)		N/A	99.4	106.2	110.0	110.0
EPS - normalised (p)		N/A	(2.1)	(1.4)	3.0	1.1
EPS - FRS 3 (p)		N/A	(2.5)	(1.8)	2.9	1.0
Gross margin (%)		38.2%	46.5%	46.0%	56.4%	45.8%
EBITDA margin (%)		(121.3%)	(25.4%)	(16.0%)	24.7%	10.8%
Operating margin (before GW and except.) (%)		(130.9%)	(32.6%)	(21.0%)	23.1%	8.9%
<b>BALANCE SHEET</b>						
<b>Fixed assets</b>		<b>1,182</b>	<b>1,321</b>	<b>1,134</b>	<b>1,108</b>	<b>1,108</b>
Intangible assets		0	611	672	678	678
Tangible assets		1,182	710	462	430	430
Investment in associates		0	0	0	0	0
Unquoted investments		0	0	0	0	0
<b>Current assets</b>		<b>7,650</b>	<b>10,255</b>	<b>7,620</b>	<b>9,998</b>	<b>10,859</b>
Stocks		2,777	2,613	2,821	3,121	2,800
Debtors		4,025	2,734	2,600	2,300	2,269
Cash		848	4,908	2,199	4,577	5,791
Other		0	0	0	0	0
<b>Current liabilities</b>		<b>(6,009)</b>	<b>(3,500)</b>	<b>(2,858)</b>	<b>(2,200)</b>	<b>(1,955)</b>
Creditors		(1,726)	(661)	(543)	(500)	(455)
Other creditors		(4,283)	(2,682)	(2,257)	(1,700)	(1,500)
Short-term borrowings		0	(157)	(58)	0	0
Minority interests		0	0	0	0	0
<b>Long-term liabilities</b>		<b>(224)</b>	<b>(35)</b>	<b>0</b>	<b>0</b>	<b>0</b>
Long-term borrowings		(213)	(34)	0	0	0
Other long-term liabilities		(11)	(1)	0	0	0
<b>Net assets</b>		<b>2,599</b>	<b>8,041</b>	<b>5,896</b>	<b>8,906</b>	<b>10,013</b>
<b>CASH FLOW</b>						
<b>Operating cash flow</b>		<b>(10,448)</b>	<b>(5,413)</b>	<b>(2,978)</b>	<b>2,726</b>	<b>1,388</b>
Net interest		658	225	150	65	100
Tax		599	95	550	(15)	(25)
Capex		(424)	(112)	(149)	(350)	(250)
Acquisitions/disposals		0	387	(65)	(30)	0
Financing		2,154	8,878	(107)	40	0
Dividends		0	0	0	0	0
Other		0	0	0	0	0
Net cash flow		(7,461)	4,060	(2,599)	2,436	1,213
<b>Opening net debt/(cash)</b>		<b>(16,561)</b>	<b>(635)</b>	<b>(4,717)</b>	<b>(2,141)</b>	<b>(4,577)</b>
HP finance leases initiated		0	0	0	0	0
Other		(8,465)	22	23	0	(0)
<b>Closing net debt/(cash)</b>		<b>(635)</b>	<b>(4,717)</b>	<b>(2,141)</b>	<b>(4,577)</b>	<b>(5,791)</b>

Source: Company accounts/Edison Investment Research

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