

# NetScientific

Clinical update

## Clinical and commercial progress continues

In January Glycotest announced that it had completed a 149-person Chinese retrospective study of its test for hepatocellular carcinoma (HCC). It demonstrated 93% sensitivity at 92% specificity, which is superior to the commonly used alpha-fetoprotein (AFP) test. Additionally, ProAxis announced continued commercial progress with the CE mark of a ProteaseTag research kit for a new enzyme, plasmin, which may have utility in inflammatory conditions of the lung.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/15	0.1	(11.3)	(24.4)	0.0	N/A	N/A
12/16	0.5	(12.3)	(20.6)	0.0	N/A	N/A
12/17e	0.6	(9.5)	(12.5)	0.0	N/A	N/A
12/18e	3.5	(12.0)	(14.5)	0.0	N/A	N/A

Note: \*PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

### Glycotest excels in hard to find HCC

The recent clinical results confirmed those from earlier studies that demonstrated that the HCC test could efficiently identify 86% of patients who were missed by an AFP test and even 78% of those who were AFP negative in the early stage disease cohort. This supports the commercial proposition for the test because the ability to catch more patients at an earlier stage will allow them to be treated surgically and significantly reduce downstream costs.

### Glycotest to launch in late 2018/early 2019

The current strategy is for Glycotest to perform an additional clinical trial in 2018 using both banked blood samples and prospectively identified patients, although the details on the study have not been released yet. The company then intends to implement the HCC panel test in a US CLIA lab in late 2018 or early 2019. These plans are contingent, however, on securing additional financing, which it hopes to conclude in a near-term Series A.

### ProAxis receives CE mark for third product

ProAxis recent announced that it received a CE mark for an active plasmin assay using its proprietary ProteaseTag technology. Plasmin, an enzyme responsible for degrading blood clots, can have its activity downregulated in response to various inflammatory lung disorders. The plasmin assay kit may therefore be useful for research involving diseases such as idiopathic pulmonary fibrosis (IPF) and acute respiratory distress syndrome (ARDS).

### Valuation: Increased to £70.5m or 102p per share

We have increased our valuation of NetScientific to £70.5m or 102p per share, from £62.1m or 90p per share. This is due to the increase in probability of success for Glycotest to 20% from 10%, resulting in an increase in the value of NetScientific's share to £19.0m from £10.6m. We expect to update our valuation with the closing of financings for the individual companies, expected in 2018.

Pharma &amp; biotech

12 January 2018

**Price** **68.00p**
**Market cap** **£47m**

US\$1.32/£

Net cash (£m) at 30 June 2017 11.1

Shares in issue 69.0m

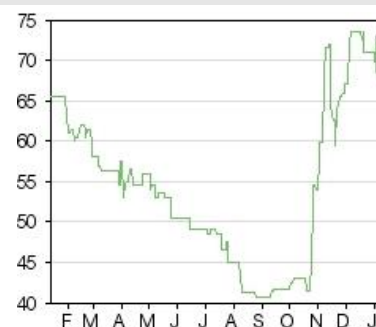
Free float 20%

Code NSCI

Primary exchange AIM

Secondary exchange N/A

#### Share price performance



% 1m 3m 12m

Abs (7.5) 58.1 3.8

Rel (local) (11.1) 53.5 (3.7)

52-week high/low 73.5p 40.8p

#### Business description

NetScientific is a healthcare IP commercialisation group with an investment strategy focused on sourcing, funding and commercialising technologies. Its portfolio of four core investments and one material investment is in three main sectors: digital health (Wanda), diagnostics (Vortex, ProAxis, Glycotest) and therapeutics (PDS Biotechnology).

#### Next events

Glycotest, PDS, Vortex and ProAxis financings 2018

Glycotest opening CLIA lab 2018

PDS and Merck Phase II initiation H118

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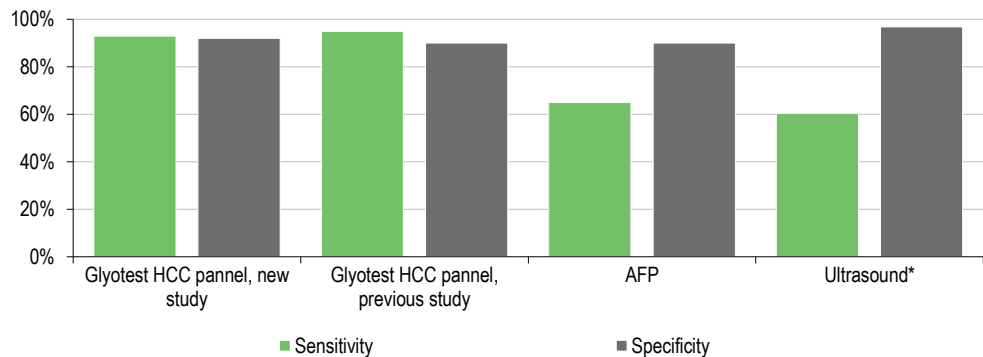
**NetScientific** **NetScientific is a research client of Edison Investment Research Limited**

## Glycotest successfully completes confirmatory trial

On 4 January 2018, Glycotest announced that it had completed a clinical trial measuring the accuracy of its blood-based test for the detection of hepatocellular carcinoma (HCC). The test combines a novel lectin immunoassay with three other biomarkers and demographic data to determine if a patient has developed the disease. The study was performed in China on 149 patients with chronic liver disease under surveillance for the development of HCC. HCC is commonly secondary to other liver diseases such as hepatitis and non-alcoholic steatohepatitis, and therefore there is a population of known at-risk individuals who require routine screening. The current standard biomarker test for these patients is alpha-fetoprotein (AFP), and the goal of the Glycotest technology is to improve on this standard by detecting both earlier forms of cancer and cancer in those patients with low AFP levels.

The data from this trial are very similar to previous data using the assay (Exhibit 1). It was able to identify patients with HCC with 93% sensitivity at 92% specificity. In previous study, composed of blood samples of 208 people with either HCC or cirrhosis, the test was able to identify HCC with a 95% sensitivity and 90% specificity. The sensitivity of AFP found in this previous study (65%) is largely in line with what has been reported in the literature: at the 20ng/mL cut-off sensitivities range from 47% to 68% with specificities in the range of 80% to 91%.<sup>1</sup> The Glycotest data also compare attractively to ultrasound, which is another commonly use screening methodology (although there is a wide range of sensitivity for the practice): 60.5% sensitivity and 96.9% specificity.<sup>1</sup> The company has not done a direct comparison to ultrasound yet, however.

**Exhibit 1: Comparison of HCC detection methods**



Source: Glycotest, Colli, et al. Note: AFP representative statistics from previous Glycotest study, \* Ultrasound historical comparison.

The company provided an additional analysis in the new data: the Glycotest assay was able to identify 86% of patients with HCC that were undetected by AFP (<20ng/mL), which conclusively demonstrates the superiority of the new test. When the same analysis was performed in the cohort of patients with early disease, The HCC panel was able to identify 78% of the patients that were missed by AFP. We should note however that disease staging was not evaluable for the entire cohort. The ability to detect early disease is of particular importance because it supports the value proposition of the product. Early stage HCC is treatable with surgery and ablation, which can limit a significant degree of downstream costs if detected early.

A limitation of the current study (although not specific to Glycotest) is that it was retrospective in nature using a pre-defined set of blood samples. The benchmark for the demonstration of clinical

<sup>1</sup> Colli A, et al. (2006) Accuracy of Ultrasonography, Spiral CT, Magnetic Resonance, and Alpha-Fetoprotein in Diagnosing Hepatocellular Carcinoma: A Systematic Review. *Am J Gastroenterol* 101, 513-523.

validity is prospectively defined tests, because they are more statistically rigorous and mirror the application of the test in a real-world setting, in which an array of factors cannot be controlled. The company has stated that it intends to initiate a study with prospective enrolment (in addition to retrospective samples) in the near future.

We believe that this new data continues to build the case that the Glycotest HCC panel can provide a meaningful improvement over the standard of care. Over 480 blood samples have been tested by the company to date. NetScientific's current strategy is to open a US-based laboratory in 2018 to support a commercial launch in late 2018 or early 2019. This strategy is contingent on the near-term completion of a Series A financing, although this may be easier with the increasing weight of clinical evidence.

## ProAxis gets CE mark for a new test

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On 8 January 2017, ProAxis announced that it had received a CE mark for a test to detect active plasmin using its ProteaseTag technology. Plasmin is a protease that has been implicated in idiopathic pulmonary fibrosis (IPF) and acute respiratory distress syndrome (ARDS) and therefore this assay could be useful for understanding the progression of these diseases. The product is intended for use in a laboratory setting in the study of these and other diseases, similar to the company's neutrophil elastase immunoassay (NEIA) kit.

Plasmin is a protease present in the blood that, among other functions, breaks down the fibrin protein found in blood clots. It is implicated in inflammatory disorders of the lung because these conditions are characterised by the impairment of fibrin breakdown, which may contribute to the pathology of these disorders. The plasmin assay may therefore be useful in the lab for the development of treatments for these disorders. Similar to the NEIA kit, there already exist other assays for plasmin activity, although the ProteaseTag technology allows very specific and rapid detection.

We expect sales of the plasmin assay to be incremental at first. However, as the recent NEIA has demonstrated with its rapid acceleration of sales, if this test can gain traction in the clinical research markets, it may provide a meaningful revenue source to the company.

## Valuation

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We have increased our valuation of NetScientific to £70.5m or 102p per share, from £62.1m or 90p per share. This increase is driven by an increase in the probability of success for the Glycotest HCC test to 20% from 10% following the results of the study, leading to an increase in the valuation for NetScientific's share of the company to £19.0m from £10.6m. We are encouraged by the consistency of the data from Glycotest and believe that the latest study should support further clinical validation and early commercial adoption. We do not plan to include the ProAxis plasmin assay in our valuation of that company until we have seen early traction for the test.

**Exhibit 2: Valuation of NetScientific**

Portfolio company	Prob. of success	Profitability	Peak sales (£m)	Margin	rNPV (£m)	Ownership	Share Value (£m)
Vortex	15.0%	2020	138	43%	16.4	95.0%	15.6
Wanda	7.5%	2019	326	52%	16.6	70.9%	11.8
ProAxis	15.0%	2020	47	51%	14.4	56.5%	8.1
Glycotest	20.0%	2020	113	51%	21.7	87.5%	19.0
PDS	10.0%	2022	270	56%	28.1	17.4%	4.9
Total							59.4
Net cash and equivalents (H117) (£m)							11.1
<b>Total firm value (£m)</b>							<b>70.5</b>
Total shares (m)							69.0
<b>Value per share (p)</b>							<b>102</b>

Source: NetScientific reports, Edison Investment Research

## Financials

We have not made any adjustments to our financial forecasts at this time. We expect to update these forecasts with the closing of any financings for individual companies. We expect these to occur for Glycotest, PDS, Vortex, and ProAxis in 2018. We include the financing shortfall as £16m in illustrative debt.

**Exhibit 3: Financial summary**

	£'000s	2014	2015	2016	2017e	2018e
Year end 31 December		IFRS	IFRS	IFRS	IFRS	IFRS
<b>PROFIT &amp; LOSS</b>						
Revenue		24	122	518	559	3,462
Cost of Sales		0	(6)	(255)	(104)	(821)
Gross Profit		24	116	263	454	2,641
Research and development		(3,098)	(7,256)	(7,443)	(6,343)	(7,197)
Selling, general & administrative		(3,212)	(4,260)	(5,001)	(4,488)	(5,839)
EBITDA		(6,352)	(11,530)	(12,570)	(10,753)	(10,609)
Operating Profit (before GW and except.)		(6,286)	(11,400)	(12,429)	(10,539)	(10,395)
Intangible Amortisation		0	0	0	0	0
Exceptionals/Other		(948)	(1,518)	(666)	0	0
Operating Profit		(7,234)	(12,918)	(13,095)	(10,539)	(10,395)
Net Interest		77	78	86	1,082	(1,587)
Other (change in fair value of warrants)		0	0	(49)	(46)	0
Profit Before Tax (norm)		(6,209)	(11,322)	(12,343)	(9,457)	(11,983)
Profit Before Tax (IFRS)		(7,157)	(12,840)	(13,058)	(9,503)	(11,983)
Tax		30	94	(18)	47	60
Deferred tax		0	0	0	0	0
Profit After Tax (norm)		(6,179)	(11,229)	(12,361)	(9,409)	(11,923)
Profit After Tax (IFRS)		(7,127)	(12,746)	(13,076)	(9,455)	(11,923)
Minority interest		702	1,905	1,881	1,945	1,937
Profit After Tax after minority interest (FRS 3)		(6,425)	(10,842)	(11,195)	(7,511)	(9,986)
Average Number of Shares Outstanding (m)		35.9	38.2	51.1	60.1	69.0
EPS - normalised (p)		(15.3)	(24.4)	(20.6)	(12.5)	(14.5)
EPS - IFRS (p)		(18)	(28)	(22)	(13)	(14)
Dividend per share (p)		0	0	0	0	0
<b>BALANCE SHEET</b>						
Fixed Assets		3,040	2,946	4,054	3,057	4,519
Intangible Assets		10	1	0	0	0
Tangible Assets		348	285	779	1,161	1,543
Other		2,681	2,660	3,275	1,896	2,976
Current Assets		17,720	23,799	11,034	10,013	13,127
Stocks		0	0	0	186	692
Debtors		853	560	1,578	1,119	346
Cash		16,867	23,239	9,456	8,708	12,088
Other		0	0	0	0	0
Current Liabilities		(1,324)	(2,206)	(2,172)	(2,151)	(2,564)
Creditors		(1,281)	(2,156)	(2,044)	(2,028)	(2,441)
Short term borrowings		(43)	(50)	(128)	(123)	(123)
Long Term Liabilities		(740)	0	(80)	(80)	(15,874)
Long term borrowings		(687)	0	(80)	(80)	(15,874)
Other long term liabilities		(53)	0	0	0	0
Net Assets		18,696	24,538	12,836	10,839	(792)
Minority Interest		(1,098)	(1,805)	(3,875)	(5,820)	(7,757)
Shareholder Equity		17,598	22,733	8,961	5,019	(8,549)
<b>CASH FLOW</b>						
Operating Cash Flow		(6,698)	(10,752)	(12,939)	(8,917)	(9,210)
Net Interest		67	38	43	(2)	(1,587)
Tax		19	83	112	47	60
Capex		(336)	(299)	(457)	(596)	(596)
Acquisitions/disposals		(2,181)	(144)	(1,261)	1,053	(1,080)
Financing		0	18,208	0	8,083	0
Dividends		0	0	0	0	0
Other		119	39	66	0	0
Net Cash Flow		(9,010)	7,172	(14,436)	(331)	(12,413)
Opening net debt/(cash)		(25,069)	(16,136)	(23,189)	(9,248)	(8,504)
HP finance leases initiated		0	0	0	0	0
Exchange rate movements		(140)	(212)	(603)	166	0
Other		218	92	1,098	(578)	0
Closing net debt/(cash)		(16,136)	(23,189)	(9,248)	(8,504)	3,909

Source: NetScientific reports, Edison Investment Research

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