EDISON

Transgene

Clinical data

TG4010 data met expectations

Pharma & biotech

Data from the Phase II stage of the TIME trial presented at the ESMO conference confirm the potential of TG4010 in non-small cell lung cancer (NSCLC). Discussions with regulators are ongoing, which should result in the Phase III stage of the trial starting in Q115. We also remain optimistic that Transgene will find a new partner for TG4010, because of the survival benefit observed so far and the prospect of an even greater benefit if combined with one of the promising immunotherapies (eg nivolumab) in development for NSCLC. We increase our valuation by €20m to €415m.

Year end	Revenue (€m)	PBT* (€m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
12/12	13.1	(42.4)	(136.4)	0.0	N/A	N/A
12/13	15.7	(41.5)	(136.2)	0.0	N/A	N/A
12/14e	12.2	(53.9)	(144.1)	0.0	N/A	N/A
12/15e	11.9	(59.7)	(155.3)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Detailed data confirm potential of TG4010

The progression free survival (PFS), overall survival (OS) and biomarker data from the Phase IIb stage of the TIME trial were presented at the ESMO conference in September. The different analyses gave consistent results and showed that TG4010 conferred a survival benefit in those patients with lower levels of the TrPAL biomarker and non-squamous NSCLC.

TIME trial set to advance in non-squamous NSCLC

Transgene is planning the Phase III stage of the TIME trial after discussing protocol amendments with regulators, but it is expected that the trial will be restricted to patients with non-squamous NSCLC and treat the first patients in Q115. Transgene has indicated that it will not use the TrPAL biomarker as a recruitment criteria, although there will be a pre-specified analysis including the biomarker.

Partnering discussions ongoing

Transgene is in discussions with various partners and still aims to sign a licensing deal for TG4010 in 2014. We continue to believe that Transgene will partner the product with a company with an oncology immunotherapy franchise, although a deal might not be signed until H115.

Valuation: DCF valuation of €415m

We have increased our valuation from €395m to €415m (€10.79 per share). The main share price catalyst is the potential licensing deal with TG4010; other events that could cause a re-rating are additional data from the Phase IIb trial with TG4010 and more details about the Phase III trial with Pexa-Vec in hepatocellular carcinoma, which is due to start in mid-2015. Transgene had €96.2m in cash at H114, which should allow the company to operate into 2016.

13 October 2014

Price	**€7.42**
Market cap	**€285m**

Net cash (€m) at 30 June 2014	38.0
Shares in issue	38.4m
Free float	39%
Code	TNG
Primary exchange	Paris
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(15.2)	(18.5)	(18.7)
Rel (local)	(7.2)	(13.2)	(16.4)

52-week high/low	€13.39	€7.32

Business description

Transgene is a French drug discovery and development company focused on the treatment of cancer and infectious diseases with immunotherapies. It has two products in Phase II development and two products about to enter Phase III.

Next events

Q314 results	21 October 2014
OS data from TIME trial with TG4010	Q414
Start of Phase III stage of TIME trial	Q115

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Data from first stage of Phase II/III TIME trial with TG4010

Exhibit 1: Kaplan-Meier curve for PFS in patients with normal levels of TrPAL biomarker

HR from stratified Cox model

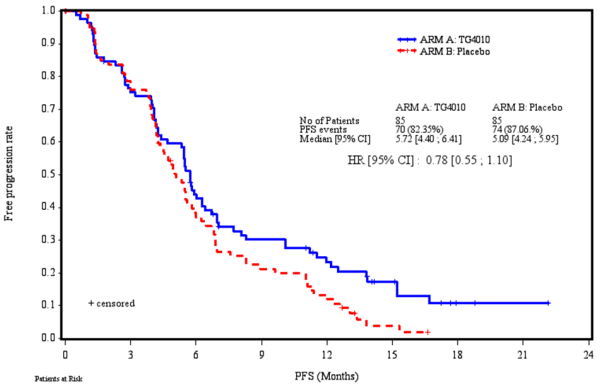


Exhibit 2: Kaplan-Meier curve for OS in patients with normal levels of TrPAL biomarker

HR from stratified Cox model

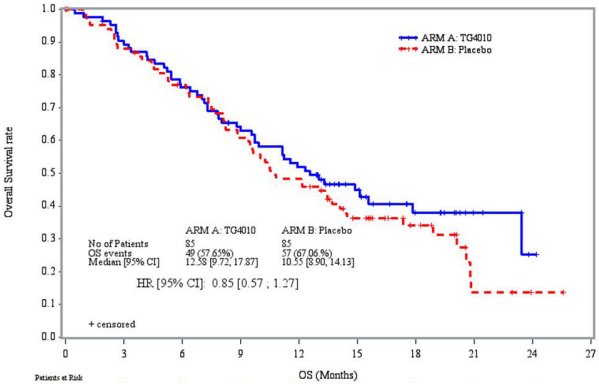


Exhibit 3: Kaplan-Meier curve for PFS in all patients with non-squamous NSCLC

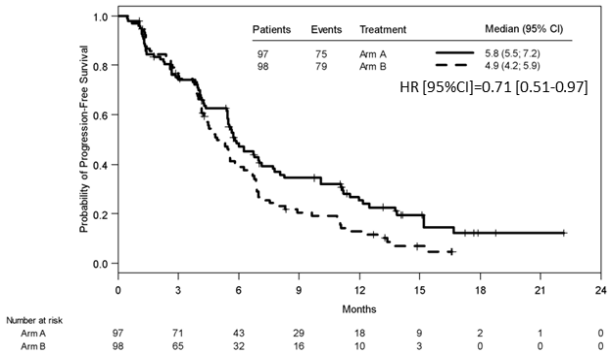


Exhibit 4: Kaplan-Meier curve for OS in all patients with non-squamous NSCLC

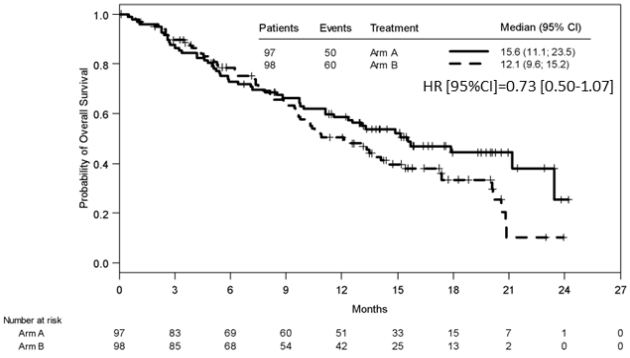


Exhibit 5: Kaplan-Meier curve for PFS in patients with non-squamous NSCLC low levels of TrPAL biomarker

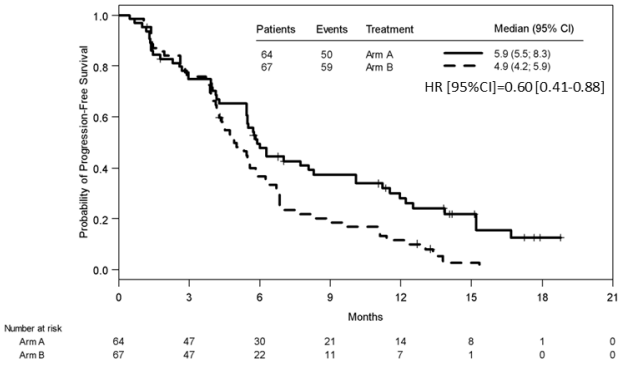
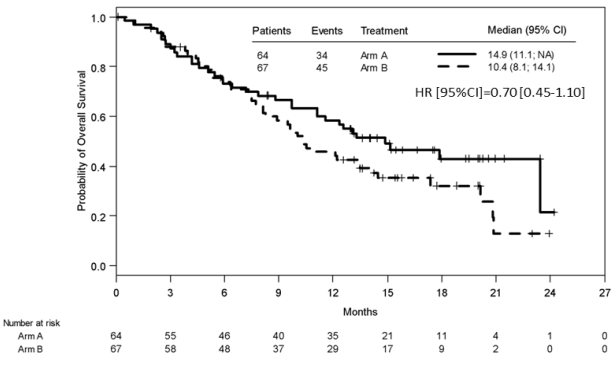


Exhibit 6: Kaplan-Meier curve for OS in patients with non-squamous NSCLC low levels of TrPAL biomarker



Source: Transgene

Update: TG4010 data met expectations

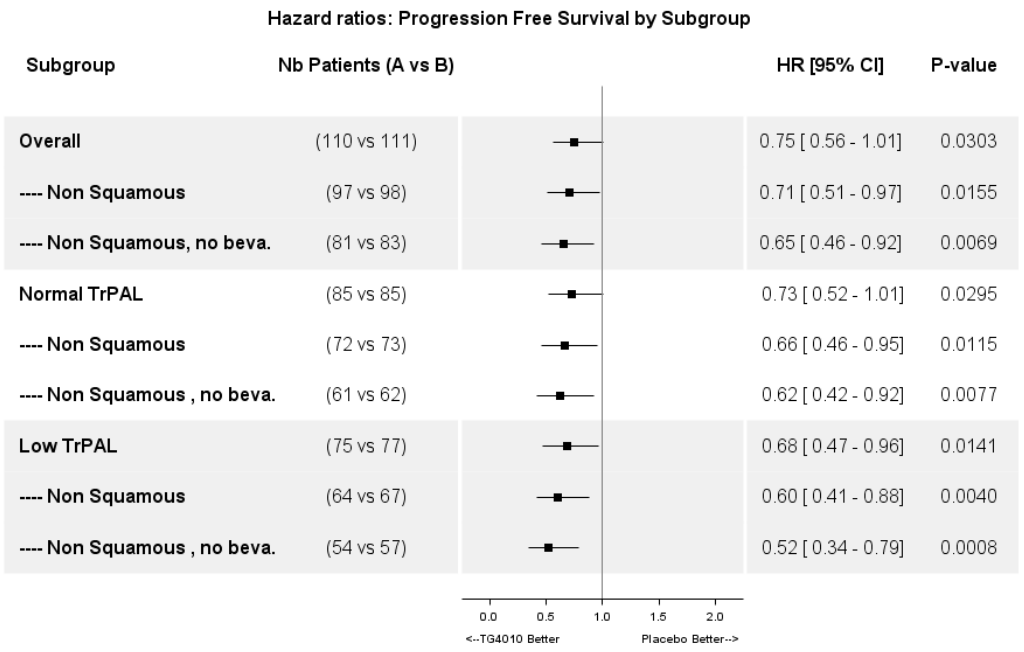
Transgene had reported in January 2014 that the Phase IIb had shown promising levels of efficacy, with an over 25% reduction of progression or death (hazard ratio (HR) <0.75) in patients with low levels of the TrPAL biomarker (triple positive activated lymphocytes, expressing CD16, CD56 and CD69). However, it had said that the primary endpoint had not been met as patients with normal levels of TrPAL receiving TG4010 did not have a meaningful improvement in PFS compared to those on placebo. Since then, the company has indicated that the strength of the signal was improving as the data matured (initial results were based on only 89 events), and that there was a particularly strong signal in non-squamous NSCLC.

The detailed results presented at the ESMO conference in September provide additional evidence on the potential of TG4010 in NSCLC and justify Transgene's decision to advance the TIME trial into the Phase III portion of the trial. They reinforce our view that Transgene will be successful in finding a new partner to replace Novartis, which decided not to exercise its option in April 2014.

The more mature data with additional patients also showed that the Phase II part of the TIME trial did in fact achieve its primary endpoint, that patients with normal levels of TrPAL benefited from treatment with TG4010. The observed HR was 0.74 (Exhibit 1, posterior probability that HR<1 = 98.6%) following the analysis of 144 events for patients with normal levels of TrPAL (below the upper limit of normal, set from the analysis of healthy volunteers in a separate study). The initial analysis was only based on the first 89 events.

The results clearly indicate that patients who benefited most from treatment with TG4010 were those with low levels of TrPAL (three lowest quartiles) and patients with non-squamous NSCLC (Exhibits 1-7). The OS data, which is based on immature data, is consistent with the PFS data, and as with other immunotherapies there is a delayed separation of the Kaplan-Maier curves. We expect that there will be a greater separation of the OS Kaplan-Maier curves, as the data matures, as occurred with the PFS data.

Exhibit 7: Forest plot of PFS by subgroup



Source: Transgene. Note: The hazard ratio (HR) is from the unstratified Cox proportional hazards model. The p-value (one-sided) is from the unstratified log-rank test.

The responses were also analysed to determine if the background chemotherapy regimen affected the activity of TG4010. This showed that the couplet therapy of gemcitabine/cisplatin or paclitaxel/carboplatin did not influence the benefit observed with TG4010, however patients who had not been treated with bevacizumab (Avastin) did have a slightly larger benefit (Exhibit 7).

TG4010 was well tolerated, with a similar proportion of adverse events observed in both the TG4010 and placebo arms. The most common adverse event associated with TG4010 was a mild-moderate injection site reaction (31% of patients).

Transgene is currently planning the Phase III stage of the TIME trial, after assessing the results of the Phase IIb stage and discussions with regulators. The trial will only recruit patients with non-squamous NSCLC and the TrPAL biomarker will not be used as an exclusion criteria, as the Phase IIb stage of the trial suggested that all patients with this form of NSCLC could benefit from treatment with TG4010 (Exhibits 3-4). This approach could also enable Transgene to achieve a broader label if it is eventually approved, ie TG4010 being suitable for all patients with non-squamous NSCLC, not just the c 75% of patients with low TrPAL levels. The primary endpoint will be OS, and one of the secondary endpoints will be OS with patients stratified according by TrPAL levels. We expect c 800 patients to be recruited during the next stage of the trial with the first patient being treated in Q115.

Transgene will continue the TIME trial without a partner if necessary, but it still aims to sign a licensing deal by the end of 2014 and is in discussions with various pharmaceutical companies. We remain optimistic that Transgene will be able to partner the product, although a deal might not be finalised until H115. The most likely companies interested in in-licensing TG4010 are those with oncology immunotherapy franchises (such as AstraZeneca, Bristol-Myers Squibb, Merck & Co and Roche), as TG4010 might act synergistically with checkpoint inhibitors and other immunotherapies.

It has recently been announced that Stephane Boissel has resigned as CFO. This has occurred at an unfortunate time for Transgene, but it should not have an impact on the partnering discussions as they are being led by Philippe Archinard (CEO) and Colin Freund (CBO).

Valuation

We have increased our DCF valuation of Transgene from €395m to €415m (€10.79 per share). We have made minor changes to our model following the company's H114 results, and delayed the potential upfront payment for TG4010 from H214 to H115 to be conservative about the timing of the potential deal, and to reflect the progression of time. Our valuation is summarised in Exhibit 8.

Transgene's shares rose to €9.50 on the back of the Phase IIb data presented at the ESMO conference, but have since fallen back to €7.42. The key catalyst for the shares in the coming months is the potential licencing agreement for TG4010, which would result in a material re-rating of the shares. Other potential catalysts are additional OS data from the Phase IIb trial with TG4010 and additional details about the Phase III trial in hepatocellular carcinoma (HCC) with Pexa-Vec due to start in mid-2015.

Exhibit 8: Valuation of Transgene

Value driver	Value (€m)	Value per share (€)	Notes
TG4010 royalties	368.3	9.58	For NSCLC, launch date: 2018; peak sales: $1.41bn; likelihood of success: 60%; royalty: 22.5%
TG4010 milestones	128.0	3.33	2015: $75m, upfront payment, 60% likelihood of success; 2017: $100m regulatory filings accepted, 50% likelihood of success; 2018: $100m, drug approval, 40% likelihood of success; 2020 and 2022: $50m, sales milestones, 30% likelihood of success
Pexa-Vec (1)	92.1	2.40	For HCC, launch date: 2019; peak sales: $380m; likelihood of success: 40%; royalty: 30%
Pexa-Vec (2)	103.0	2.68	For CRC, launch date: 2020; peak sales: $920m; likelihood of success: 30%; royalty: 30%
TG4001	49.2	1.28	For head & neck cancer, launch date: 2020; peak sales: $315m; likelihood of success: 40%; royalty: 25%
Grants and licence fees	21.5	0.56	
R&D	(204.3)	(5.31)	
Admin	(30.2)	(0.79)	
Tax	(36.1)	(3.54)	
Capex	(14.7)	(0.38)	Includes €5m investment for commercial production agreement with Sanofi
Net cash	38.0	0.99	Net cash at H114
Total	**414.9**	**10.79**	

Source: Edison Investment Research. Note: A WACC of 12.5% was used. The royalty rates are effective royalty rates as Transgene will be marketing some products. Valuation does not include potential revenues from TG4040.

Financials

Transgene has a strong balance sheet with a cash position of €96.2m at H114, following the €65.5m capital raise in March and sale of its shares in Jennerex to SillaJen (co-development partner for the oncolytic virus Pexa-Vec). We estimate that Transgene has sufficient capital to operate into 2016, which will be significantly extended if TG4010 is out-licensed.

We have amended our forecasts as shown in Exhibit 9, following Transgene's H114 results. We have increased our expected cash burn (cash flow before financing) from €50.6m to €52.6m, which is still in line with company guidance of €50-55m. We expect its cash burn to increase to €57.5m in FY15 primarily due to Phase III clinical trial costs for Pexa-Vec.

Exhibit 9: Summary of changes to estimates

	Sales (€m)			PBT (€m)			EPS (c)		
	Old	New	% chg.	Old	New	% chg.	Old	New	% chg.
2014e	12.1	12.2	1.1	(55.0)	(53.9)	N/A	(155.8)	(144.1)	N/A
2015e	12.3	11.9	(3.8)	(58.1)	(59.7)	N/A	(156.4)	(155.3)	N/A

Source: Edison Investment Research

Exhibit 10: Financial summary

€000s	2011	2012	2013	2014e	2015e
Year end 31 December	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	14,446	13,061	15,735	12,243	11,864
Cost of Sales	0	0	0	0	0
Gross Profit	14,446	13,061	15,735	12,243	11,864
EBITDA	(42,088)	(39,372)	(38,287)	(50,800)	(56,946)
Operating Profit (before GW and except)	(44,322)	(41,765)	(40,813)	(53,281)	(59,254)
Intangible Amortisation	(506)	(370)	(385)	(388)	(331)
Exceptionals	0	0	0	0	0
Operating Profit	(44,828)	(42,135)	(41,198)	(53,669)	(59,585)
Other	(3)	(488)	(691)	(301)	0
Net Interest	1,430	(106)	(39)	(295)	(433)
Profit Before Tax (norm)	(42,895)	(42,359)	(41,543)	(53,878)	(59,687)
Profit Before Tax (FRS 3)	(43,401)	(42,729)	(41,928)	(54,265)	(60,018)
Tax	0	0	0	0	0
Profit After Tax (norm)	(43,119)	(42,833)	(42,473)	(54,633)	(59,687)
Profit After Tax (FRS 3)	(43,401)	(42,729)	(41,928)	(54,265)	(60,018)
Average Number of Shares Outstanding (m)	31.6	31.8	31.9	38.4	38.4
EPS - normalised (c)	(137.1)	(136.4)	(136.2)	(144.1)	(155.3)
EPS - FRS 3 (c)	(138.0)	(136.0)	(134.5)	(143.1)	(156.1)
Dividend per share (c)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	N/A	N/A	N/A	N/A	N/A
EBITDA Margin (%)	N/A	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)	N/A	N/A	N/A	N/A	N/A
BALANCE SHEET					
Fixed Assets	49,800	62,090	64,501	59,058	58,419
Intangible Assets	1,581	1,497	1,329	1,139	1,010
Tangible Assets	25,507	24,805	23,988	23,226	22,716
Other	22,712	35,788	39,184	34,693	34,693
Current Assets	143,784	98,374	61,349	87,307	34,562
Stocks	1,093	1,107	975	1,176	1,176
Debtors	624	2,012	1,896	1,206	1,206
Cash	139,507	92,915	47,862	66,486	13,741
Other	2,560	2,340	10,616	18,439	18,439
Current Liabilities	(21,117)	(19,402)	(23,996)	(33,424)	(34,525)
Creditors	(10,840)	(9,587)	(9,364)	(11,602)	(12,703)
Short term borrowings	0	0	0	0	0
Short term leases	(955)	(961)	(8,830)	(16,796)	(16,796)
Other	(9,322)	(8,854)	(5,802)	(5,026)	(5,026)
Long Term Liabilities	(31,051)	(41,484)	(45,232)	(47,983)	(52,751)
Long term borrowings	0	0	0	0	0
Long term leases	(27,374)	(38,006)	(40,788)	(43,302)	(48,070)
Other long term liabilities	(3,677)	(3,478)	(4,444)	(4,681)	(4,681)
Net Assets	141,416	99,578	56,622	64,959	5,706
CASH FLOW					
Operating Cash Flow	(45,702)	(51,294)	(50,186)	(53,208)	(55,081)
Net Interest	1,540	194	244	(30)	(433)
Tax	0	0	0	0	0
Capex	(3,850)	(1,945)	(2,184)	(1,909)	(2,000)
Acquisitions/disposals	0	0	0	2,553	0
Financing	254	725	70	62,732	0
Dividends	0	0	0	0	0
Other	7,900	7,086	7,902	11,242	8,500
Net Cash Flow	(39,858)	(45,234)	(44,154)	21,380	(49,014)
Opening net debt/(cash)	(162,462)	(111,178)	(53,948)	1,756	(6,389)
HP finance leases initiated	(11,425)	(11,593)	(11,411)	(12,515)	(8,500)
Other	(1)	(403)	(139)	(720)	0
Closing net debt/(cash)	(111,178)	(53,948)	1,756	(6,389)	51,125

Source: Transgene accounts, Edison Investment Research. Note: Our estimates exclude the potential upfront payment for TG4010.

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