12th October 2016

Healthcare

Transgene

Price EUR3.23

TG4001 to be tested in combination with avelumab in HPV+ head and neck cancer

Fair Value EUR5 vs. EUR4.5 (+55%) **CORPORATE**

Bloomberg	TNG.FP
Reuters	TRNG PA
12-month High / Low (EUR)	3.9 / 2.4
Market Cap (EUR)	125
Ev (BG Estimates) (EUR)	182
Avg. 6m daily volume (000)	77.40
3y EPS CAGR	-8.4%

	1 M	3 M	6 M	31/12/15
Absolute perf.	16.2%	23.8%	17.0%	27.7%
Healthcare	-1.3%	-6.3%	0.3%	-10.2%
DJ Stoxx 600	-1.5%	2.2%	2.2%	-7.0%

YEnd Dec. (EURm)	2015	2016e	2017e	2018e
Sales	0.0	0.0	0.0	0.0
% change				
EBITDA	-33.2	-25.8	-23.8	-26.0
EBIT	-35.8	-35.1	-26.0	-28.1
% change		*2.1%*	*25.8%*	*-8.2%*
Net income	-37.9	-36.1	-27.0	-29.1
% change		*4.9%*	*25.1%*	*-7.9%*

	2015	2016e	2017e	2018e
Operating margin	NM	NM	NM	NM
Net margin	NM	NM	NM	NM
ROE	-142.8	379.2	74.0	44.4
ROCE	-73.1	-70.5	-53.5	-58.6
Gearing	83.4	-604.3	-229.4	-170.9

(EUR)	2015	2016e	2017e	2018e
EPS	-0.98	-0.94	-0.70	-0.76
% change	-	*4.9%*	*25.1%*	*-7.9%*
P/E	NS	NS	NS	NS
FCF yield (%)	NM	NM	NM	NM
Dividends (EUR)	0.00	0.00	0.00	0.00
Div yield (%)	NM	NM	NM	NM
EV/Sales	NS	NS	NS	NS
EV/EBITDA	NS	NS	NS	NS
EV/EBIT	NS	NS	NS	NS

The company announced yesterday the inking of a collaboration agreement with PFE/MRK to evaluate TG4001 in combination with their anti-PD-L1 (avelumab) in patients suffering from HPV+ head and neck cancer. We are cautiously optimistic (we see strong theoretical synergies between the two approaches, but many other promising cocktails are being evaluated). We raise our FV from EUR4.5 to EUR5.0 after having included the outlook associated with this novel combo.

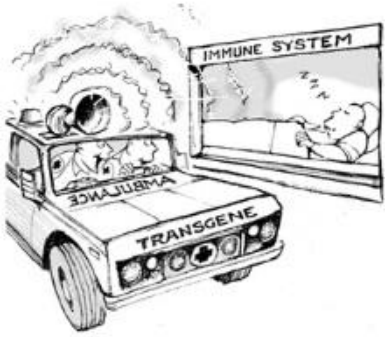
ANALYSIS

- **Transgene inked an exclusive collaboration agreement with PFE/MRK to evaluate the potential of TG4001 (HPV16 + IL-2 cancer vaccine) in combination with avelumab (PD-L1 blocker)** in patients who 1/ developed a head & neck cancer following an infection with the Human Papilloma Virus type 16; 2/ failed to respond to the current standard of care. Of note, TNG will be the sponsor of the upcoming Phase I/II study (to be initiated in H1 17).
- **Admittedly, generating efficacy and safety data are strong prerequisite before adopting a more bullish stance. But we see three reasons to be quite optimistic**. First, there are strong theoretical synergies between the two approaches in our view… Cancer vaccines like TG4001 are known to boost the anti-tumour immune attack against one or numerous antigen(s) (and might participate in the upregulation of PD-L1); while checkpoint blockers disinhibit the downstream response. Second, although nivo, pembro and others managed to yield very promising responses (see Fig. below), those were slightly less impressive in HPV+ patients. Third, TG4001 could be a quite differentiated approach within PFE/MRK's immune-oncology portfolio; and H&N seems to be one these few indications the big pharmas are willing to target. So we believe the current deal could be turned into a licensing one in case of very positive results.

Keynote-012 - HNSCC overall response rate

Best overall response	Total (n=117)	HPV+ (n=34)	HPV- (n=80)
ORR	29 (24,8%)	7 (20,6%)	21 (26,3%)
Complete response	1 (0,9%)	1 (2,9%)	0 (0%)
Partial response	28 (23,9%)	6 (17,6%)	21 (26,3%)
Stable disease	29 (24,8%)	9 (26,5%)	20 (25,0%)
Progressive disease	48 (41,0%)	13 (38,2%)	33 (41,3%)

- **This is obviously good news for the company but we also urge "cautious optimism" in the light of the current competitive landscape** (although TG4001 has already demonstrated its ability to induce a viral clearance in other HPV-associated cancers). Apart from the "classic" PD-1/CTLA-4 combo, many other promising candidates are already being tested as add-on to PD-1/PD-L1 in this indication. AZN for instance is developing durvalumab with a range of different molecules including Inovio's HPV vaccine and IPH's monalizumab… And we note that IDO inhibitors and antibodies targeting activating receptors (e.g. OX40, CD137) are also in the ranks.



VALUATION

- **We have raised our Fair Value from EUR4.5 to EUR5.0** to include the potential associated with this new development (main BG assuptions: inking of an licensing deal with a big pharma (be it MRK/PFE or another one) + double-digit royalties on a peak sales of EUR250m in a conservative approach + no milestone payments at this time + applied probability of success of 20%).

NEXT CATALYSTS

- 2017: TG4010 data in combination with BMS' Opdivo in 2L NSCLC (non-small cell lung cancer).

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