EDISON

Onconova Therapeutics

Clinical update

ONTRAC stopped

Pharma & biotech

Onconova has discontinued its Phase III ONTRAC trial of rigosertib (IV) in combination with gemcitabine (gem) vs gem alone as first-line treatment of pancreatic cancer, after the study failed a pre-planned interim analysis. We assigned no value to rigosertib in pancreatic cancer because of the specific challenges in this indication and hence the event does not change our valuation. This remains at $476m, equivalent to $22.3 per share basic ($20.7/share, fully diluted), with our investment thesis centred on the potential of rigosertib in myelodysplastic syndromes (MDS). Top-line results from the ONTIME trial in high-risk MDS are due in Q114.

Year end	Revenue ($m)	PBT* ($m)	EPS* ($)	DPS ($)	P/E (x)	Yield (%)
12/11	1.5	(27.6)	(14.8)	0.0	N/A	N/A
12/12	46.2	(30.3)	(15.5)	0.0	N/A	N/A
12/13e	3.3	(68.5)	(8.9)	0.0	N/A	N/A
12/14e	50.0	(48.9)	(2.3)	0.0	N/A	N/A

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

ONTRAC study discontinued after futility analysis

The Phase III ONTRAC trial was designed to enrol 650 patients with an interim analysis at 150 patients. The interim analysis concluded that the combination was unlikely to offer an improvement in overall survival and thus continuation of the trial would be futile. This comes as no surprise as many similar combinations (a new drug plus gem) have failed in Phase III trials for pancreatic cancer, with the notable exceptions of FOLFIRINOX [oxaliplatin, irinotecan, fluorouracil, and leucovorin] and Abraxane. Furthermore, even if a modest benefit had been shown, further studies would be required because the standard of care has now moved to Abraxane/gem.

Focus remains on MDS – ONTIME data in Q114

The termination of ONTRAC should be a blessing in disguise, since it will allow Onconova to focus on rigosertib in its two most promising indications: higher-risk MDS for the IV and lower-risk MDS for the oral form. If rigosertib (IV) meets its primary endpoint in the ONTIME Phase III trial in higher-risk, second-line MDS in Q114, Onconova could file its first NDA next year. We believe the 270 plus-patient trial has a good chance of delivering a positive outcome, based on our analysis of Phase I and II data. Additional data reported at the 2013 American Society of Hematology (ASH) also further confirmed the drug's activity and safety.

Valuation: Unchanged at $476m

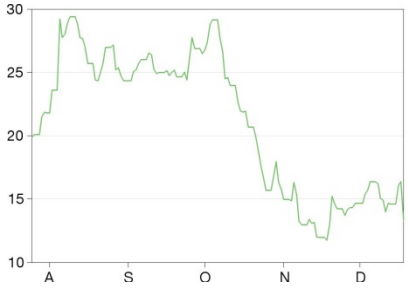
Our risk-adjusted DCF valuation remains unchanged at $476m, or $22.3 per basic share ($20.7/share, fully diluted), because we previously assigned no value to the pancreatic cancer indication. Hence, the fall in the share price in response to the ONTRAC discontinuation could represent a buying opportunity. The ONTIME top line data is the next major valuation inflection point, which if positive would add significant value to our model.

19 December 2013

Price	**US$13.3**
Market cap	**US$285m**

Net cash ($m) as at Dec 2013e	99
Shares in issue	21.4m
Free float	21%
Code	ONTX
Primary exchange	NASDAQ
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	13.4	(46.7)	N/A
Rel (local)	12.2	(49.2)	N/A
52-week high/low	US$29.4	US$11.8	

Business description

Onconova Therapeutics is a clinical-stage bio-pharmaceutical company focused on developing novel small molecule drug candidates to treat cancer. Its lead drug candidate, rigosertib, is partnered with Baxter (Europe) and SymBio (Japan/Korea) and is in Phase III trials for higher-risk MDS (IV form), and in Phase II for lower-risk MDS (oral form).

Next events

Rigosertib Phase III MDS top-line data	Q114
Rigosertib NDA filling	H214
Rigosertib (oral) MDS reg. path decision	2014

Analysts

Jason Zhang PhD +1 646 653 7027

Robin Davison +44 (0)20 3077 5737

healthcare@edisongroup.com

Edison profile page

Onconova datasheet

Exhibit 1: Onconova pipeline summary

Drug	Indication	Status	Notes
Rigosertib	Higher-risk MDS after HMA (IV)	Phase III top-line results Q114	Licensed to **Baxter** (total earnable payments of $770m) for Europe, and **SymBio** (total earnable payments of $71m) for Japan/Korea. Onconova retains all rights elsewhere (including in the US). Temple University is entitled to 25% of sub-licence fees from Baxter and SymBio and a low single-digit royalty on net sales.
	Lower-risk MDS (oral)	Phase II final results at ASH	
	Refractory head and neck cancer (oral)	Phase II single arm, first phase of 20 pts results: 2014	
ON 013105	Refractory lymphoma, solid tumours	Phase I (solid tumour)	Specific inhibitor of PLK2. Studies could resume in Q114.
Recilisib	Acute radiation syndrome	Phase I ongoing	Collaboration with the US Department of Defence for radiation-induced cytopenia. Expected to be licensed out early.

Source: Edison Investment Research. Notes: Only clinical stage assets shown.

Exhibit 2: Ongoing rigosertib clinical trials

Trial name	Patients	Treatment	Details
ONTIME (04-21)	MDS, Vidaza or Dacogen failure	Rig (CI, 3-d Q2W for eight cycles or Q4W after eight cycles) plus BSC vs BSC alone	290-pt Phase III, primary endpoint: OS. Start: Nov 2010; results: Q114
ONTARGET (09-05)	MDS, TD, low, Int-1 or trisomy 8 Int-2	Oral, 560mg BID for two wks Q3W	60-pt Phase II, single arm, Primary endpoint: Units of blood cell transfusions at wk 8. Start: May 2012, results: Oct 2014
09-08	MDS, AML and CML	Oral, various doses BID for three wks Q4W; plus Vidaza	40-pt Phase I/II, primary endpoints: safety. Trial start: Aug 2013. Results: Aug 2015
09-09	Squamous cell carcinoma, refractory	Oral, 560mg BID for two wks Q3W	80-pt Phase II, primary endpoint: ORR; trial start: March 2013. Results: Sept 2015
09-07	MDS, transfusion dependent, low, Int-1	Oral, 560mg BID for two wks Q3W	40 pt Phase II, primary endpoints: HI. Trial start: July 2013. Results: June 2015
04-24 (ONTIME)	MDS, failure after Vidaza or Dacogen, excess blasts	CI, 1,800mg/m^2 for three days Q2W (eight cycles) or Q4W (after eight cycles)	90 pt Phase IIIB, primary endpoint: relationship btw Bm response and survival. Start: Aug 2013. Results Dec 2015

Source: Edison Investment Research, Clinicaltrials.gov

Exhibit 3: Competitive environment: approved or developmental drugs for lower and higher-risk MDS

Drug	Company	MOA	Main indication	Status	Route of admin.	Selected relevant data in higher and lower-risk MDS	Reference
Vidaza (azaciditine)	Celgene	HMA	High risk MDS	Approved in all major countries	IV and SC		N/A
Dacogen (decitabine)	Eisai/ Astex	HMA	High risk MDS; elderly AML	Approved in US for MDS, EU for elderly AML	IV	Phase I, n=36 Int-2/high MDS failed Vidaza, 7/36 (19.4%) ORR, incl. 3mCR and 2SD, med. OS 7.3 mos	ASH 2013 Abs#2796
Revlimid	Celgene	IMiDs	Low risk, 5q-; MM	Approved worldwide	Oral	Phase II plus pred., n=25 low/Int-1, non-5q- MDS, 5/23 (22%) RBC TI	ASH 2013 Abs# 1506
SGI-110	Ostuka/ Astex	HMA	New or ref. MDS, AML	Phase II	SC	n=93, 74 AML, 19 MDS, 2 CR, 1CRp and 2CRi in AML; 2mCR, 3 HI-E, 1 HI-N and 1 HI-P in MDS (prior HMA)	ASH 2013 Abs# 1548
ARRY-614	Array Biopharma	p38 MAPK and Tie2 inhibitor	Low/Int-1 MDS	Phase I	Oral, QD or BID	n=62, 12/54 evaluable and 9/31 on drug >16 wks had HI	ASH 2013 Abs# 387
Sapacitabine	Cyclacel Pharma	Nucleoside analogue	Elderly MDS ref. to HMA	Phase II randomised	Oral, QD or BID	n=63; 2 CR, 2 CRp, and 5 major HI; med. OS 8.6-9.7 mos	ASH 2013 Abs# 2752
Clolar (clofarabine)	Sanofi/ Genzyme	second-gen nucleoside analogue	rr ALL, AML etc	Approved for rr ALL	IV daily x5	Phase II w/ cytarabine, n=29, 8/24 (33%) CR/CRp/mCR, 4/24 (17%) had SD, med. OS 4.8 mos	ASH 2013 Abs# 1525
Pracinostat (SB939)	MEI Pharma	HDAC inhibitor	New AML and MDS	Phase II	Oral, thrice weekly (TIW)	In pilot Phase II, MDS, w/aza, 7/9 (CR+CRi+PR) incl 7 CR	ASH 2012 ABS# 3821
Telintra (TLK199)	Telik	Glutathione S-transferase Inh.	Lower risk MDS	Phase II	Oral	n=38 low/Int-1 MDS, 11 of 38 (29%) had HI-E; 3 of 11 (27%) had TI	Cancer. 2012, 118:2138-2147
Oral azaciditine (CC-486)	Celgene	HMA	Maintenance Rx in AMLw/ CR	Phase III	Oral	n=53 low/Int-1 MDS; 18/53 (34%) ORR, 13/53 (24.5%) HI, 12/30 (40%) TI>56 d, 7/30 (23.3%) TI>84 d	ASH 2012 Abs# 424
Mocetinostat	Mirati Therap.	HDAC inhibitor	Int-2/high MDS	Phase I/II	Oral	n=66 AML and MDS, w/aza., 22 MDS (13/22 (59%, CR+CRi), 6/17 (35%) TI	ASH 2013 Abs# 1550
Vosaroxin	Sunesis Pharm.	Nucleoside analogue	AML or MDS	Phase I/II	IV	Data in MDS pending	N/A

Source: Edison Investment Research. Note: IMiDs = immunomodulatory drugs.

Exhibit 4: Financial summary

$m	2011	2012	2013e	2014e
	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS				
Revenue	1.5	46.2	3.3	50.0
Cost of Sales	0.0	0.0	0.0	0.0
Gross Profit	1.5	46.2	3.3	50.0
EBITDA	(27.9)	(44.7)	(77.8)	(58.5)
Operating Profit (before amort. and except.)	(27.6)	(22.3)	(69.0)	(50.1)
Intangible Amortisation	0.0	0.0	0.0	0.0
Exceptionals	1.3	0.4	(0.1)	(0.1)
Other	0.0	0.6	0.5	1.2
Operating Profit	(26.3)	(21.3)	(68.5)	(49.0)
Net Interest	(0.0)	(8.6)	0.0	0.0
Profit Before Tax (norm)	(27.6)	(30.3)	(68.5)	(48.9)
Profit Before Tax (FRS 3)	(26.3)	(29.9)	(68.5)	(49.0)
Tax	0.0	0.0	0.4	0.0
Profit After Tax (norm)	(27.6)	(30.3)	(68.1)	(48.9)
Profit After Tax (FRS 3)	(26.3)	(29.9)	(68.1)	(49.0)
Average Number of Shares Outstanding (m)	2.14	2.21	7.97	22.00
EPS - normalised ($)	(14.79)	(15.51)	(8.86)	(2.34)
EPS - normalised fully diluted ($)	(14.79)	(15.51)	(8.86)	(2.34)
EPS - (IFRS) ($)	(12.30)	(13.55)	(8.54)	(2.23)
Dividend per share (c)	0.0	0.0	0.0	0.0
Gross Margin (%)	100.0	100.0	100.0	100.0
EBITDA Margin (%)	(1877.3)	(96.7)	(2339.8)	(117.1)
Operating Margin (before GW and except.) (%)	(1854.3)	(48.2)	(2075.9)	(100.2)
BALANCE SHEET				
Fixed Assets	0.6	0.6	(0.1)	1.3
Intangible Assets	0.0	0.0	0.0	0.0
Tangible Assets	0.6	0.6	(0.1)	1.3
Investments	0.0	0.0	0.0	0.0
Current Assets	3.8	83.3	105.9	59.0
Inventory	0.0	0.0	0.0	0.0
Accounts recievable, net	0.0	0.0	0.0	0.0
Cash and cash equivalents	2.7	81.5	99.0	59.0
Other	1.1	1.7	6.8	0.0
Current Liabilities	(12.1)	(25.4)	(17.4)	(21.2)
Creditors	(12.1)	(25.4)	(17.4)	(21.2)
Short term borrowings	0.0	0.0	0.0	0.0
Long Term Liabilities	(10.8)	(15.5)	(14.1)	(14.1)
Deferred revenue, long term	(10.7)	(15.4)	(14.0)	(14.0)
Other long term liabilities	(0.1)	(0.0)	(0.0)	(0.0)
Net Assets	(18.4)	43.0	74.3	25.0
CASH FLOW				
Operating Cash Flow	(14.2)	1.6	(62.5)	(39.3)
Net Interest	(0.0)	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0
Capex	(0.2)	(0.3)	(0.6)	(0.3)
Acquisitions/disposals	0.0	0.0	0.0	0.0
Financing	9.8	77.5	79.7	0.5
Dividends	0.0	0.0	0.0	0.0
Net Cash Flow	(4.6)	78.8	16.5	(39.0)
Opening net debt/(cash)	(7.3)	(2.7)	(81.5)	(99.0)
HP finance leases initiated	0.0	0.0	0.0	0.0
Other	0.0	0.0	1.0	(1.0)
Closing net debt/(cash)	(2.7)	(81.5)	(99.0)	(59.0)

Source: Edison Investment Research, Onconova accounts

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
245 Park Avenue, 39th Floor
10167, New York
US

Sydney +61 (0)2 9258 1162
Level 33, Australia Square
264 George St, Sydney
NSW 2000, Australia

Wellington +64 (0)48 948 555
Level 15, 171 Featherston St
Wellington 6011
New Zealand