EDISON

Sunesis Pharmaceuticals

Earnings update

Interim readout coming up

Pharma & biotech

Sunesis has reported Q2 earnings and provided an update on enrolment in its ongoing dose escalation study of vecabrutinib. It continues to enrol the 50mg cohort and will announce when it is complete. The company also stated that it intended to provide an update on the program at the American Society of Hematology (ASH) meeting in December 2018.

Year end	Revenue ($m)	PBT* ($m)	EPS* ($)	DPS ($)	P/E (x)	Yield (%)
12/16	2.5	(38.0)	(2.42)	0.00	N/A	N/A
12/17	0.7	(35.5)	(1.45)	0.00	N/A	N/A
12/18e	0.2	(31.9)	(0.89)	0.00	N/A	N/A
12/19e	0.0	(36.3)	(0.97)	0.00	N/A	N/A

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

Enrolment ongoing, sites expanding

The ongoing dose escalation portion of the Phase Ib/II study of vecabrutinib continues to enrol patients with B-cell malignancies. The company confirmed the goal of announcing the target dose in autumn 2018, although this will depend on enrolment rates and activity, among other factors. The company also announced it has added two additional clinical sites (Moffitt Cancer Center in Tampa and Memorial Sloan Kettering in New York) and that it planned to continue to add sites in preparation for the Phase II portion of the study.

New data on Imbruvica resistance

An interesting study into the background of Imbruvica resistance, partially supported by Sunesis, was presented at the European Hematological Association meeting. It reported data on 26 chronic lymphocytic leukemia (CLL) patients that have been undergoing treatment with Imbruvica. Of these, 13 developed resistance to the drug and, of these, seven harbored a mutation in C481 and progressed much more quickly than other resistant patients (13 vs 32.5 months). Although limited in scope, these data provide some of the first prospective confirmations of the presence of C481 mutation as the primary Imbruvica resistance mechanism.

Takeda shifts to pediatric glioma

Although the company focus is on the development of vecabrutinib, its compound TAK-580 has been under development at Takeda for the treatment of melanoma and other solid tumors. Following the completion of several of these studies, Sunesis has confirmed the current focus for the compound is development for pediatric glioma, a rare cancer with very few treatment options. There is an ongoing Phase I/II glioma study (expected completion in 2024) although details are scarce.

Valuation: Reduced slightly to $224m or $6.21/share

We have lowered our valuation to $224m or $6.21 per basic share from $236.6m or $6.88 per basic share. This reduction is largely driven by a lower valuation of TAK-580 ($18m vs $39m) and lower net cash ($15.7m) but offset by advancing our NPVs and lower unallocated spending.

17 August 2018

Price	**US$2.06**
Market cap	**US$74m**
Net cash ($m) at Q218 + subsequent offerings	15.7
Shares in issue	36.1m
Free float	95%
Code	SNSS
Primary exchange	NASDAQ
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(14.2)	(23.4)	(7.2)
Rel (local)	(15.4)	(26.6)	(19.4)
52-week high/low	US$7.4		US$1.8

Business description

Sunesis Pharmaceuticals is a pharmaceutical company focused on oncology. Its lead asset is SNS-062, a Bruton's tyrosine kinase inhibitor for chronic lymphocytic leukemia for Imbruvica-refractory patients. The program is entering a dose escalation Phase Ib/II. It has also developed TAK-580 with partner Takeda, and the preclinical PDK1 inhibitor SNS-510.

Next events

Vecabrutinib Phase II dose announced	Autumn 2018
ASH update	December 2018
SNS-510 IND filing	2019

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Edison profile page

On track in dosing study

Sunesis's lead program is development of vecabrutinib for the treatment of B-cell malignancies. The program is in the dose-ranging portion of a Phase Ib/II study, and the company reiterated on the Q218 conference call that the goal is to announce the dose for the Phase II portion of the trial in autumn 2018, although this will depend on results from the study, among other factors.

Earlier in the year a cohort expansion was triggered because the study encountered an adverse event in the 50mg cohort. This was per the protocol design (the standard "3+3" protocol) to ensure the event did not reoccur and to rule it out as a drug effect. Sunesis announced in the most recent update that it was continuing to enrol the expanded 50mg cohort and would provide an update when it progresses to the 100mg cohort. The company stated that an update on the trial will be presented at the ASH meeting in December 2018, at which time we expect some safety details to be presented. In other clinical news the company has expanded the number of clinical sites performing the study to seven across the US with the addition of Moffitt Cancer center in Tampa and Memorial Sloan Kettering in New York.

Vecabrutinib is a non-covalent Bruton's tyrosine kinase (BTK) inhibitor, with potential efficacy in patients that have developed resistance to other BTK inhibitors. Both of the approved BTK inhibitors and a majority of those in development form a covalent bond with BTK at the cysteine-481 amino acid, and this residue is frequently mutated when patients develop resistance. Imbruvica is the market-leading BTK inhibitor by a wide margin with approximately $1.1bn in sales in Q218, and dominates the treatment of chronic lymphocytic leukemia. Calquence (acalabrutinib, AstraZeneca) was approved for the smaller indication of mantle cell lymphoma in October 2017 and had sales of $12m in Q218.

Exhibit 1: BTK inhibitors (selection)

Drug	Company	Status	Lead indication	Binding mode
Imbruvica	AbbVie	Approved	CLL, MCL, WM	Covalent
Calquence	AstraZeneca	Approved	MCL	Covalent
Zanubrutinib	BeiGene	Phase III	WM	Covalent
ONO/GS-4059	Ono/Gilead	Phase II	CLL, Sjogren's	Covalent
SNS-062	Sunesis	Phase I/II	CLL, MCL, WM	Non-covalent
ARQ-531	ArQule	Phase I	CLL, DBCL, MCL, WM	Non-covalent
TG-1701	TG Therapeutics	Phase I	B-cell malignancies	Covalent
PRN2246	Principia	Preclinical	CNS	Covalent
LOXO-305	Loxo Oncology	Preclinical	B cell lymphoma	Non- covalent
CG'806	Aptose	Preclinical	AML, B-cell cancers	Non- covalent

Source: BioCentury, ClinicalTrials.gov, Edison Investment Research

Clinical study of C481 mutations

Recently data were presented at the European Hematological Association Annual meeting in June regarding the rates and mechanisms Imbruvica resistance in CLL patients.[1] The study (which was partially funded by Sunesis) examined the rates of mutation in BTK (as well as in phospholipase Cγ2) in CLL patents treated with Imbruvica. Of the 26 patients evaluated at the time of presentation, half (13/26) had progressed during treatment. Of these, 7/13 harbored a mutation of C481 (either C481S or C481R). Moreover, the patients with mutations progressed much more quickly than those without: 13 vs 32.5 months.

[1] Bonifiglio S, et al. (2018) Half of Chronic Lymphocytic Leukemia Patients Relapsing Under Ibrutinib Carry BTK and PLCG2 Mutations: a European Research Initiative on Cll (Eric) Real-World Study. "EHA 2018 Annual Meeting," 218883.

These results are important for a number of reasons. First, although patient numbers are limited, they provide insight into the real world-prevalence rates of this resistance mechanism, which has been limited to date. Moreover, they provide support for the notion that these mutations have a significant negative impact on prognosis, which could be potentially addressed by vecabrutinib.

Shift for TAK-580 toward pediatric glioma

TAK-580 is a pan-RAF inhibitor developed by Sunesis that has been licensed to Takeda for development. Takeda has been investigating the drug for the treatment of melanoma and a range of other solid tumors. The purpose of these studies was largely exploratory to identify indications in which the compound has significant activity. There is limited information available on these initial studies, although we note that two recently ended: one in solid tumors completed and one in melanoma was terminated. An additional study in solid tumors remains ongoing with a target completion date in September 2018, and recently in February 2018 a Phase I/II study in pediatric glioma (and other solid tumors) was initiated. Although development of the compound is Takeda's responsibility, the company confirmed on the conference call that development for pediatric glioma is now the primary focus of the compound.

The Phase I/II glioma study has a target enrolment of 120 patients. The initial Phase I portion of the study will examine safety in patients with solid tumors driven by RAF or related pathways before moving on to the Phase II portion studying glioma. The target completion date for the study is 2024. Glioma is a rare cancer, and rarer in children with a rate of 4.84 per 100,000 in the US per year.[2] There are few treatment options for the disease, with surgery in the front line, followed by radiation and chemotherapy.

Valuation

We have lowered our valuation slightly to $224m or $6.21 per basic share from $236.6m or $6.88 per basic share. This change is largely driven by a lower valuation for TAK-580 ($18m from $39m). We now model TAK-580 for the treatment of pediatric glioma (previously melanoma), which we believe will be able to command pricing at $370,000 per course of treatment, but we forecast approval at the earliest in 2025 if the drug can achieve breakthrough therapy status. Both this pricing and timeline are possible given the rare nature of the disease and the lack of other treatment options. We believe that this pricing is justified given the rare nature of the disease, the pediatric target population, and the lack of treatment options. We reference the pricing of Oncospar (WAC of approximately $320,000) as a comparator and adjust for future price growth. We have lowered the probability of success for the program to 10% from 15% because of the difficulty in developing drugs for this indication. Additional factors affecting our valuation are lower net cash ($15.7m vs $18.1m) and increased share count (36.1m from 34.4m), but these are offset by advancing our NPVs and a reduction in unallocated costs associated with a reduced head count.

[2] Oncolink, University of Pennsylvania

Exhibit 2: Valuation of Sunesis

Development Program	Clinical stage	Expected Commercialization	Prob. of success	Launch year	Launch Pricing ($)	Peak sales ($m)	Patent/Exclusivity Protection	Royalty/ Margin	rNPV ($m)
TAK-580	Phase I/II	Licensed to Takeda	10%	2025	500,000	603	2032	15%	$18
Vecabrutinib	Phase Ib/II	Proprietary	20%	2022	152,000	666	2034	56%	$186
SNS-510	IND ready	Proprietary	10%	2024	130,000	361	2031	51%	$24
Unallocated costs (discovery programs, administrative costs, etc.)									($20)
Total									$209
Net cash and equivalents (Q218 + subsequent financings) ($m)									$15.7
Total firm value ($m)									$224.4
Total basic shares (m)									36.1
Value per basic share ($)									$6.21
Convertible pref stock (m)									6.3
Warrants and options									8.8
Total diluted shares									51.2
Value per diluted share									$5.12

Source: Sunesis reports, Edison Investment Research

Financials

Sunesis reported an operating loss of $6.6m for Q218, which demonstrates continued cost control and was below our expectations. We have reduced our expected operating loss for 2018 to $30.3m from $32.5m. The company ended the quarter with $20.4m in cash and $7.3m in debt. In June 2018, the company entered into a stock purchase agreement with Aspire Capital, which included an initial purchase of $500,000 of common stock at $2.19. Sunesis will be able to sell at its discretion up to an additional $15m worth of additional stock to Aspire over the next two years, with prices based on the market price. The company announced subsequent to the end of the period that $2.6m has been drawn from this facility as well as its previous at-the-market facility. We expect the company to require at least $135m in additional financing before profitability in 2023, which we record as illustrative debt ($25m, $20m, $30m, $40m and $20m in 2018–2022 respectively).

Exhibit 3: Financial summary

$'000s	2016	2017	2018e	2019e
Year end 31 December	US GAAP	US GAAP	US GAAP	US GAAP
PROFIT & LOSS				
Revenue	2,536	669	237	0
Cost of Sales	0	0	0	0
Gross Profit	2,536	669	237	0
Research and development	(22,881)	(21,540)	(17,967)	(18,244)
Selling, general & administrative	(16,115)	(13,548)	(12,575)	(12,952)
EBITDA	(36,313)	(34,428)	(30,315)	(31,205)
Operating Profit (before GW and except.)	(36,302)	(34,419)	(30,306)	(31,196)
Intangible Amortisation	0	0	0	0
Exceptionals/Other	0	0	0	0
Operating Profit	(36,302)	(34,419)	(30,306)	(31,196)
Net Interest	(1,721)	(1,039)	(1,595)	(5,086)
Other (change in fair value of warrants)	0	0	0	0
Profit Before Tax (norm)	(38,023)	(35,458)	(31,901)	(36,282)
Profit Before Tax (IFRS)	(38,023)	(35,458)	(31,901)	(36,282)
Tax	0	0	0	0
Deferred tax	0	0	0	0
Profit After Tax (norm)	(38,023)	(35,458)	(31,901)	(36,282)
Profit After Tax (IFRS)	(38,023)	(35,458)	(31,901)	(36,282)
Average Number of Shares Outstanding (m)	15.7	24.5	36.0	37.6
EPS - normalised ($)	(2.42)	(1.45)	(0.89)	(0.97)
EPS - IFRS ($)	(2.42)	(1.45)	(0.89)	(0.97)
Dividend per share ($)	0.0	0.0	0.0	0.0
BALANCE SHEET				
Fixed Assets	3	1,401	11	2
Intangible Assets	0	0	0	0
Tangible Assets	3	20	11	2
Other	0	1,381	0	0
Current Assets	43,231	32,933	41,809	29,366
Stocks	0	0	0	0
Debtors	0	0	0	0
Cash	42,588	31,750	40,339	27,896
Other	643	1,183	1,470	1,470
Current Liabilities	(5,814)	(8,901)	(1,559)	(1,593)
Creditors	(2,481)	(1,697)	(1,559)	(1,593)
Short term borrowings	(3,333)	(7,204)	0	0
Long Term Liabilities	(11,271)	(112)	(39,552)	(59,552)
Long term borrowings	(11,102)	0	(39,552)	(59,552)
Other long term liabilities	(169)	(112)	0	0
Net Assets	26,149	25,321	709	(31,777)
CASH FLOW				
Operating Cash Flow	(36,962)	(36,142)	(27,384)	(32,443)
Net Interest	0	0	0	0
Tax	0	0	0	0
Capex	0	(26)	0	0
Acquisitions/disposals	0	0	0	0
Financing	26,111	32,930	3,715	0
Dividends	0	0	0	0
Other	0	0	0	0
Net Cash Flow	(10,851)	(3,238)	(23,669)	(32,443)
Opening net debt/(cash)	(38,596)	(28,153)	(24,546)	(787)
HP finance leases initiated	0	0	0	0
Exchange rate movements	0	0	0	0
Other	408	(369)	(90)	0
Closing net debt/(cash)	(28,153)	(24,546)	(787)	31,656

Source: Sunesis reports, Edison Investment Research

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