EDISON

ASLAN Pharmaceuticals

Partnering update

ASLAN acquires full rights to varlitinib

Pharma & biotech

In January 2018, ASLAN announced that it had fully acquired the global commercial rights to varlitinib from its partner, Array BioPharma. Previously, the agreement stipulated that ASLAN develop the drug and sublicense it, and we view the current agreement as a significant improvement. We believe that ASLAN brings significant value to the table in Asian development capacity. The licence is now consistent with the goal of directly commercialising varlitinib in the US and parts of Asia.

Year end	Revenue (NT$m)	PBT* (NT$m)	EPS* (NT$)	DPS (NT$)	P/E (x)	Yield (%)
12/15	0.0	(403)	(7.32)	0.0	N/A	N/A
12/16	373.0	(247)	(2.35)	0.0	N/A	N/A
12/17e	0.0	(1,088)	(8.78)	0.0	N/A	N/A
12/18e	0.0	(1,215)	(9.34)	0.0	N/A	N/A

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

$24m in upfronts and $105m in milestones

Under the terms of the new deal, ASLAN will pay Array $12m upfront and an additional $12m by the first year anniversary. In addition, Array will be entitled to $30m in development milestones and $75m in commercial milestones, as well as a low double-digit tiered royalty.

Deal essential to ASLAN's global sales strategy

The previous agreement with Array stipulated that ASLAN would develop the drug through Phase II and out-license it to a global partner in return for 50% of the sublicensing revenue. However, this agreement was inconsistent with ASLAN's more recent goals of directly selling its drugs in the US and certain Asian territories and out-licensing in Europe and Japan.

Chinese pivotal trial accelerated

ASLAN announced that after consulting with officials from the Chinese FDA it was anticipating a reduction in time to market for varlitinib by about one year over previous expectations. The trial is currently enrolling 68 patients and is expected to provide top-line objective response rate (ORR) data by the end of 2018. The company has begun implementing the sales and manufacturing infrastructure to support the launch of the product.

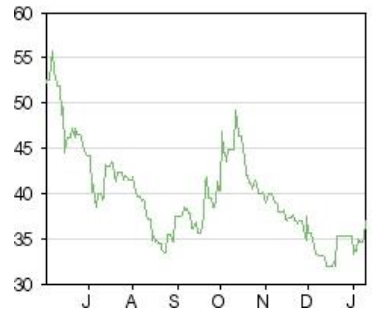
Valuation: Slight adjustment to NT$9.3bn or NT$71.85

We have adjusted our valuation to NT$9.3bn or NT$71.85 per share from $9.5bn or NT$72.87 per share. This is attributable to the near-term payments associated with the new varlitinib agreement. We view the new agreement as a significant positive for the company over the previous licence, although these factors were included in our previous assumptions. This is offset by moving up our expected commercialisation of varlitinib in China to late 2019, and a slight increase to our US pricing expectations. We have increased the future financing requirement to NT$3.0bn from NT$2.5bn to cover expenses associated with the new licence.

10 January 2018

Price	**NT$37.00**
Market cap	**NT$4815m**
	US$1/NT$30.36
Net cash (NT$bn) at end June 2017	1.85
Shares in issue	130.1m
Free float	50.9%
Code	6497
Primary exchange	Taipei
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	12.0	(17.4)	N/A
Rel (local)	6.7	(20.3)	N/A
52-week high/low	NT$55.8		NT$31.8

Business description

ASLAN Pharmaceuticals is a Singapore-based drug developer targeting Asia prevalent diseases. It has varlitinib in pivotal clinical trials for biliary tract cancer and gastric cancer, and will be advancing ASLAN003 to Phase II trials for acute myeloid leukaemia.

Next events

ASLAN004 Phase I initiation	2018
Varlitinib first-line BTC results	2018
Varlitinib GC interim results	2018
Varlitinib Chinese BTC results	Late 2018

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Edison profile page

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ASLAN gains global rights to varlitinib

ASLAN is currently developing the pan-HER inhibitor varlitinib for the treatment of solid tumours, which it licensed from Array BioPharma in 2011. The company's two most advanced programmes are for biliary tract cancer, which is in pivotal trials, and gastric cancer, which is in a Phase II/III trial. These indications are of a high prevalence in Asia and are orphan indications in the US and Europe, and the company's stated goal has been to sell this drug directly in certain Asian counties and the US and license it in Europe and Japan. However, both its current development plan and its sales strategy were at odds with the licensing agreement it had with Array, which stipulated that ASLAN develop the drug through early proof of concept clinical trials and find a sublicensing partner for Phase III development and commercialisation. ASLAN and Array would have split any sublicensing royalties under this agreement. We previously forecast that ASLAN would have to renegotiate this licence to execute on its global strategy.

The new deal grants ASLAN global rights to the drug. In return it will pay Array $24m in upfront payments ($12m on signing and $12m by the first anniversary) as well as $30m in development milestones and $75m in commercial milestones. In addition, there is a low double-digit tiered royalty.

Given that the current biliary tract trial has the potential to support approval in as early as 2020, we believe that these are attractive terms, considering that ASLAN gets global rights. We believe that ASLAN brings value to the table in its ability to efficiently develop this asset leveraging its Asian clinical capacity, and that this asset would go undeveloped otherwise.

China timeline accelerated

ASLAN announced on 8 January 2018 that it expected a faster pathway to commercialisation in China than previously anticipated. After discussions with the Chinese FDA, the company provided guidance that it expected top-line data from its ongoing 68-person pivotal biliary tract cancer trial to be available by the end of 2018. The company previously guided to only interim data being available in 2018. The primary endpoint of the trial will now be objective response rate (ORR), whereas previously it was percentage change in tumour size at week 12 and overall survival. We view this development as highly encouraging as it demonstrates the recognition from the Chinese regulatory authorities of the need for new treatments in this area. The company has stated that this will accelerate the pathway to market by approximately a year, and that it has begun implementing the infrastructure in China to support a commercial launch.

Valuation

We have slightly adjusted our valuation to NT$9.3bn or NT$71.85 per share, from $9.5bn or NT$72.87 per share, to reflect the renegotiation of the licence with Array. We should note that we view this agreement as a significant improvement over the previous licence. However, we previously included a licence structure similar to this (with low single-digit royalties) into our model, as we understood that it would need to be renegotiated. This adjustment is largely due to the near-term payments associated with the new deal. We have added an additional term for the upfront and $35m in sales milestones ($5m on first sales and $30m associated with sales hurdles, out of a $75m potential total) for varlitinib to our valuation table (NT$518), and have included $15m in research milestones in our R&D valuations. We expect the company to incur further R&D milestone payments if it progresses with other varlitinib development programmes that we currently do not

include in our model. These changes have shifted a portion of our unallocated costs into these respective categories. We previously included royalties in our COGS for varlitinib in line with the current agreement. These factors are offset by slight increases to our US launch pricing estimates (approximately 8% higher) due to continued pricing power across the industry. Our price growth model is otherwise conservative at 2% per year. We have also adjusted our commercialisation timeline in China to reflect the recent announcement that top-line data would be available in 2018. We now expect approval and launch in late 2019 (from 2020 before). We expect to update our valuation with the release of results from the Phase II portion of the gastric cancer clinical trial and from the Phase II first line biliary tract cancer trial expected in 2018.

Exhibit 1: Valuation of ASLAN

Programme	Indication	Region	Clinical stage	Prob. of success	Launch year	Peak sales ($m)	Margin/royalties	rNPV (NT$m)
Varlitinib	2nd line BTC	US + Europe	Phase II/III	30%	2020	277	59%	3,380
		East Asia	Phase II/III	30%	2019-2020	195	53-58%	2,053
		R&D						(312)
	1st line GC	US + Europe	Phase II/III	20%	2021	182	57%	883
		East Asia	Phase II/III	20%	2021	302	54-60%	1,430
		R&D						(281)
		Upfront and sales milestones payable						(518)
ASLAN003	1st line AML	US + Europe	Phase II ready	10%	2022	308	59%	1,055
		R&D						(147)
ASLAN002 royalties	1st line BC + GC	US + Europe	Phase II	15%	2022	909	5%	470
Unallocated costs								(512)
Total								**7,502**
Net cash and equivalents (Q217) ($m)								1,847
Total firm value ($m)								**9,349**
Total basic shares (m)								130.1
Value per share ($)								**71.85**

Source: ASLAN reports, Edison Investment Research

Financials

We have incorporated the near-term varlitinib deal terms into our financial forecasts as R&D expenses. The acceleration of the timeline in China has resulted in first revenue for varlitinib in 2019, although we expect it to be small given the lateness of approval in the year. We expect the company to have a cash runway through the Phase II readouts in 2018, although we have increased the future financing requirement to NT$3.0bn from NT$2.5bn, which we record in 2019 as debt. We expect that part of this financing need may be offset by the out-licensing of varlitinib rights for Europe and Japan. Otherwise, our forecasts remain unchanged.

Exhibit 2: Financial summary

NT$000s	2015	2016	2017e	2018e	2019e
31-December	IFRS	IFRS	IFRS	IFRS	IFRS
INCOME STATEMENT					
Revenue	0	373,018	0	0	22,554
Cost of Sales	0	(4,038)	0	0	(3,383)
Gross Profit	0	368,980	0	0	19,171
R&D	(210,471)	(425,296)	(864,507)	(986,706)	(1,041,728)
SG&A	(223,690)	(224,721)	(244,442)	(249,331)	(863,773)
EBITDA	(384,537)	(232,716)	(1,077,436)	(1,204,124)	(1,854,417)
Normalised operating profit	(386,191)	(235,167)	(1,075,689)	(1,202,777)	(1,853,069)
Amortisation of acquired intangibles	0	0	0	0	0
Exceptionals	0	0	0	0	0
Share-based payments	(47,970)	(45,870)	(33,260)	(33,260)	(33,260)
Reported operating profit	(434,161)	(281,037)	(1,108,949)	(1,236,037)	(1,886,329)
Net Interest	(33,376)	(16,932)	(12,512)	(12,512)	(12,512)
Joint ventures & associates (post tax)	0	0	0	0	0
Exceptionals	16,910	5,644	0	0	0
Profit Before Tax (norm)	(402,657)	(246,455)	(1,088,201)	(1,215,289)	(1,865,581)
Profit Before Tax (reported)	(450,627)	(292,325)	(1,121,461)	(1,248,549)	(1,898,841)
Reported tax	0	0	0	0	0
Profit After Tax (norm)	(402,657)	(246,455)	(1,088,201)	(1,215,289)	(1,865,581)
Profit After Tax (reported)	(450,627)	(292,325)	(1,121,461)	(1,248,549)	(1,898,841)
Minority interests	0	0	0	0	0
Discontinued operations	0	0	0	0	0
Net income (normalised)	(402,657)	(246,455)	(1,088,201)	(1,215,289)	(1,865,581)
Net income (reported)	(450,627)	(292,325)	(1,121,461)	(1,248,549)	(1,898,841)
Basic average number of shares outstanding (m)	55	105	124	130	137
EPS - basic normalised (NT$)	(7.32)	(2.35)	(8.78)	(9.34)	(13.65)
EPS - diluted normalised (NT$)	(7.32)	(2.35)	(8.78)	(9.34)	(13.65)
EPS - basic reported (NT$)	(8.19)	(2.78)	(9.05)	(9.59)	(13.89)
Dividend (NT$)	0.00	0.00	0.00	0.00	0.00
BALANCE SHEET					
Fixed Assets	5,200	19,201	20,527	20,527	20,527
Intangible Assets	430	2,727	2,727	2,727	2,727
Tangible Assets	2,919	12,437	12,437	12,437	12,437
Investments & other	1,851	4,037	5,363	5,363	5,363
Current Assets	890,962	1,718,671	1,692,203	510,251	1,767,787
Stocks	0	0	0	0	834
Debtors	0	41,867	0	0	3,708
Cash & cash equivalents	889,728	1,673,906	1,689,305	507,353	1,760,347
Other	1,234	2,898	2,898	2,898	2,898
Current Liabilities	(65,984)	(123,061)	(177,113)	(197,938)	(308,543)
Creditors	(33,043)	(123,061)	(177,113)	(197,938)	(308,543)
Tax and social security	0	0	0	0	0
Short term borrowings	0	0	0	0	0
Other	(32,941)	0	0	0	0
Long Term Liabilities	(2,066,865)	(269,692)	(282,204)	(294,716)	(3,307,228)
Long term borrowings	(279,491)	(269,692)	(282,204)	(294,716)	(3,307,228)
Other long term liabilities	(1,787,374)	0	0	0	0
Net Assets	(1,236,687)	1,345,119	1,253,413	38,124	(1,827,457)
Minority interests	0	0	0	0	0
Shareholders' equity	(1,236,687)	1,345,119	1,253,413	38,124	(1,827,457)
CASH FLOW					
Op Cash Flow before WC and tax	(384,537)	(232,716)	(1,077,436)	(1,204,124)	(1,854,417)
Working capital	(6,269)	48,749	95,919	20,825	106,063
Exceptional & other	16,848	3,184	(9,019)	(9,817)	(9,817)
Tax	0	0	0	0	0
Net operating cash flow	(373,958)	(180,783)	(990,536)	(1,193,116)	(1,758,171)
Capex	(1,095)	(12,094)	(1,747)	(1,347)	(1,347)
Acquisitions/disposals	0	(2,627)	0	0	0
Net interest	0	0	0	0	0
Equity financing	1,053,660	1,031,496	996,495	0	0
Dividends	0	0	0	0	0
Other	(260)	(2,186)	(1,326)	0	0
Net Cash Flow	678,347	833,806	2,887	(1,194,463)	(1,759,518)
Opening net debt/(cash)	53,083	(610,237)	(1,404,214)	(1,407,101)	(212,637)
FX	(15,027)	(37,794)	0	0	0
Other non-cash movements	0	(2,035)	0	0	0
Closing net debt/(cash)	(610,237)	(1,404,214)	(1,407,101)	(212,637)	1,546,881

Source: ASLAN reports, Edison Investment Research

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