

I-Mab BioPharma (IMAB US)

Uiliedlimab disclosed promising data from the US phase I study

■ **Uiliedlimab showed promising preliminary efficacy and tolerability.** I-Mab announced preliminary clinical data from a US phase I study of uiliedlimab (CD73 mAb) in combination with atezolizumab (PD-L1 mAb) in patients with advanced cancer on 19 May 2021. The abstract will be presented as poster at ASCO meeting in June 2021 and has been selected as one of the Top 12 abstracts for poster discussion during the Developmental Therapeutics – Immunotherapy session. Uiliedlimab was administered intravenously at doses of 5, 10 or 15 mg/kg weekly (QW) or 15 or 20 mg/kg every 3 weeks (Q3W) alone in the first cycle and in combination with atezolizumab (1,200 mg Q3W) starting on week 4. According to the preliminary results, uiliedlimab is safe and well tolerated up to 20 mg/kg Q3W and 15 mg/kg QW without dose-limiting toxicity (DLT) or ≥G3 AE. Among the 13 efficacy-evaluable patients (median prior lines of treatment were 3L) dosed at ≥ 10 mg/kg, complete response (CR=1) and partial response (PR=2) were observed in 3 patients (ORR=23%) together with 3 stable disease (SD) patients (DCR=46%). Notably, one PD-(L)1 inhibitor naïve patient with clear cell ovarian cancer (OC) achieved CR at 10 mg/kg QW and remains on study after 17 months, which surprised us given that OC patients are usually not sensitive to PD-1/L1 therapies and no PD-1/L1 has been approved for OC yet. Besides, two patients with NSCLC dosed at 15 mg/kg QW and 20 mg/kg Q3W, respectively, achieved PR. For these two PR patients, one patient failed nivolumab and the other received no prior PD-(L)1 inhibitor treatment. We think the promising results provide as preliminary PoC evidence for uiliedlimab.

■ **Uiliedlimab is a potential first & best-in-class CD73 antibody with no “hook effect”.** Uiliedlimab is a highly differentiated CD73 antibody that binds to a unique epitope of CD73 to confer pharmacological advantages by avoiding the “hook effect” commonly seen with other CD73 antibodies. In the US phase 1 study, uiliedlimab demonstrated a linear pharmacokinetic (PK) profile and reached full receptor occupancy on B cells at the middle and high dose levels with no “hook effect”. Hence, we expect wider therapeutic window for uiliedlimab compared with Oleclumab (CD73 mAb) developed by AstraZeneca. Besides the US phase I trial, I-Mab is also conducting a phase 1/2 trial in China evaluating uiliedlimab in combination with toripalimab (PD-1 mAb) in advanced or metastatic cancers. Worldwide, oleclumab and uiliedlimab are two leading CD73 antibodies which are at Phase2 and Phase1/2 trials.

■ **Maintain BUY.** To reflect the promising Phase I data, we raise the forecast for uiliedlimab and expect it to be approved in 2025E. Maintain BUY and lift our DCF-based TP from US\$72.49 to US\$86.53 (WACC: 9.86%, terminal growth rate: 3.0%).

Earnings Summary

(YE 31 Dec)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue (RMB mn)	30	1,543	941	1,317	1,198
Net profit (RMB mn)	(1,452)	580	(551)	(471)	(653)
EPS (RMB per ADS)	N/A	8.07	(7.69)	(6.57)	(9.11)
Consensus EPS (RMB per ADS)	N/A	N/A	(8.64)	(3.86)	(5.16)
R&D expenses (RMB mn)	840	985	1,000	1,050	1,103
Capex (RMB mn)	12	100	100	100	100

Source: Company data, CMBIS estimates

BUY (Maintain)

Target Price **US\$86.53**
 (Previous TP **US\$72.49**)
 Up/Downside **+19.43%**
 Current Price **US\$72.45**

China Healthcare Sector

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Mkt. Cap. (US\$ mn) 5,246
 Avg. 3mths t/o (US\$ mn) 24.15
 52W High/Low (US\$) 72.78/20.00
 Total Issued Shares (mn) 72
 Source: Bloomberg

Shareholding Structure

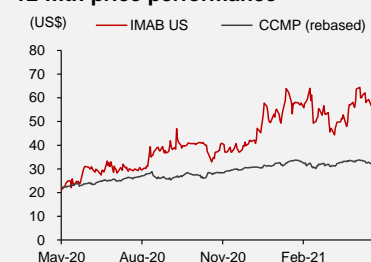
Founders 3%
 Pre-IPO investors 68%
 Other public shareholders 29%
 Source: Bloomberg

Share performance

	Absolute	Relative
1-mth	27.5%	29.9%
3-mth	25.3%	28.4%
6-mth	77.3%	55.3%

Source: Bloomberg

12-mth price performance



Source: Bloomberg

Auditor: PWC
Web-site: www.i-mabbiopharma.com

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Global CD73 antibody competitive landscape

Globally, six CD73 antibodies have entered into clinical stage. Oleclumab (MEDI-9447) from MedImmune (a subsidiary of AstraZeneca) is currently the most advanced CD73 antibody globally which is at Phase 2 trials. Uliledlimab is another global leading CD73 antibody at Phase 1/2 studies. We think uliledlimab has global first-in-class potential given its fast clinical progress. Besides, BMS-986179 from Bristol-Myers Squibb, NZV-930 (from Novartis) and CPI-006 (from Corvus) are assessed in Phase 1 trials.

To date, I-Mab's Uliledlimab and Akeso Bio's AK119 are the only two clinical-stage CD73 antibodies in China.

Recall that oleclumab + durvalumab demonstrated 4.7% ORR in CRC and 5% ORR in pancreatic cancer, and BMS-986179 + nivolumab showed 13.4% ORR in solid tumors. Uliledlimab showed best-in-class potential given uliledlimab+ atezolizumab exhibited 23% ORR in advanced cancers (1 CR and 2 PRs out of 13 patients).

Figure 1: Global CD73 antibody candidates under development

Product	Company	US status	China status
MEDI9447 (Oleclumab)	AstraZeneca	Phase 2 in NSCLC or RCC (+ Durvalumab); Phase 2 in NSCLC after PD-(L)1 therapies (+Durvalumab); Phase 1b/2 in EGFRm NSCLC (+osimertinib / AZD4635); Phase 2 in prostate cancer (+ AZD4635); Phase 1/2 in TNBC (+ Paclitaxel + Carboplatin + Durvalumab); Phase 1b/2 in pancreatic cancer (+ chemo +/- Durvalumab); Phase 1 in bladder cancer (+/- Durvalumab); Phase 1 in solid tumors (mono or combo Durvalumab);	N/A
Uliledlimab (TJD5, TJ004309)	I-Mab	Phase 1 in advanced cancers (+ Atezolizumab)	Phase 1/2 in solid tumors (mono or +PD-1)
BMS-986179	BMS	Phase 1/2a in solid tumors (mono or combo Nivolumab)	N/A
NZV-930 (SRF-373)	Novartis / Surface Oncology	Phase 1/1b in advanced cancers (+ PDR001 and/or NIR178); Phase 1/1b in solid tumors (+ KAZ954)	N/A
CPI-006	Corvus	Phase 1/1b in advanced cancers (mono or + Ciforadenant / Pembrolizumab)	N/A
AK119	Akeso Bio	N/A	Phase 1a in COVID-19 (healthy volunteers); Phase 1 in solid tumors (combo PD-1)

Source: Clinicaltrials.gov, Insight, CMBIS

Valuation

Figure 2: Risk-adjusted DCF valuation

DCF Valuation (in Rmb mn)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
EBIT	(551)	(471)	(653)	413	2,337	2,971	3,720	4,499	5,106	5,662	6,053	6,411	6,720	6,929	7,191
Tax rate	0%	0%	0%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
EBIT*(1-tax rate)	(551)	(471)	(653)	351	1,986	2,526	3,162	3,824	4,340	4,813	5,145	5,449	5,712	5,889	6,112
+ D&A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Change in working capital	(330)	(181)	25	(344)	(819)	(351)	(294)	(235)	(114)	(148)	(136)	(115)	(102)	(89)	(76)
- Capex	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
FCFF	(981)	(752)	(728)	(94)	1,067	2,075	2,768	3,489	4,126	4,565	4,909	5,234	5,509	5,700	5,936
Terminal value															89,098
FCF + Terminal value	(981)	(752)	(728)	(94)	1,067	2,075	2,768	3,489	4,126	4,565	4,909	5,234	5,509	5,700	95,035
Present value of enterprise (RMB mn)	36,115														
Net debt (RMB mn)	(3,772)														
Equity value (US\$ mn)	6,203														
No. of ADS	71,690,660														
DCF per share (US\$)	86.53														
Terminal growth rate	3.0%														
WACC	9.86%														
Cost of Equity	12.5%														
Cost of Debt	4.5%														
Equity Beta	0.90														
Risk Free Rate	3.0%														
Market Risk Premium	10.5%														
Target Debt to Asset ratio	30.0%														
Effective Corporate Tax Rate	15.0%														

Source: CMBIS estimates

Figure 3: Sensitivity analysis (US\$)

		WACC				
		8.86%	9.36%	9.86%	10.36%	10.86%
Terminal growth rate	2.0%	96.42	87.68	80.13	73.57	67.82
	2.5%	100.92	91.32	83.11	76.03	69.87
	3.0%	106.17	95.53	86.53	78.83	72.18
	3.5%	112.41	100.46	90.48	82.03	74.81
	4.0%	119.93	106.31	95.11	85.74	77.82

Source: Company data, CMBIS estimates

Figure 4: CMBIS estimates revision

RMB mn	New			Old			Diff (%)		
	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E
Revenue	941	1,317	1,198	941	3,804	2,429	0.00%	-65.39%	-50.69%
Gross Profit	941	1,245	1,152	941	3,260	2,162	0.00%	-61.81%	-46.72%
Operating Profit	(572)	(487)	(666)	(572)	533	(148)	N/A	N/A	N/A
Net profit	(551)	(471)	(653)	(551)	550	(132)	N/A	N/A	N/A
EPS (RMB)	(7.69)	(6.57)	(9.11)	(7.69)	6.52	(1.84)	N/A	N/A	N/A
Gross Margin	100.00%	94.58%	96.13%	100.00%	85.70%	88.97%	+0.00 ppt	+8.88 ppt	+7.16 ppt

Source: Company data, CMBIS estimates

Figure 5: CMBIS estimates vs consensus

RMB mn	CMBIS			Consensus			Diff (%)		
	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E
Revenue	941	1,317	1,198	737	1,386	1,228	27.70%	-4.99%	-2.44%
Gross Profit	941	1,245	1,152	645	1,209	1,035	45.94%	2.99%	11.32%
Operating Profit	(572)	(487)	(666)	(929)	(700)	(978)	N/A	N/A	N/A
Net profit	(551)	(471)	(653)	(865)	(742)	(867)	N/A	N/A	N/A
EPS (RMB)	(7.69)	(6.57)	(9.11)	(8.64)	(3.86)	(5.16)	N/A	N/A	N/A
Gross Margin	100.00%	94.58%	96.13%	87.50%	87.25%	84.25%	+13.33 ppt	-0.63 ppt	+6.64 ppt

Source: Company data, CMBIS estimates

Financial Statements

Income statement

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E	YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue	30	1,543	941	1,317	1,198	Profit before tax	(1,452)	483	(551)	(471)	(653)
Cost of sales	0	0	0	(71)	(46)	Depreciation and amortization, etc.	16	0	0	0	0
Gross profit	30	1,543	941	1,245	1,152	Change in working capital	185	(133)	(330)	(181)	25
Administrative expenses	(655)	(402)	(463)	(532)	(612)	Tax paid	0	(12)	0	0	0
R&D expenses	(840)	(985)	(1,000)	(1,050)	(1,103)	Others	384	0	0	0	0
Selling expenses	0	0	(50)	(150)	(103)	Net cash from operating activities	(868)	338	(881)	(652)	(628)
Fair value change of warrants	6	0	0	0	0	Capex	(12)	(100)	(100)	(100)	(100)
Operating profit	(1,459)	156	(572)	(487)	(666)	Net proceeds from disposal of short-term investments	(32)	0	0	0	0
Finance costs, net	28	23	21	16	13	Other investing activities	257	0	0	0	0
Other income (expenses), net	(20)	413	0	0	0	Net cash from investing activities	212	(100)	(100)	(100)	(100)
Pre-tax profit	(1,452)	592	(551)	(471)	(653)	Net proceeds from shares	184	3,652	0	0	0
Income tax	0	(12)	0	0	0	Net bank borrowing	(30)	0	0	0	0
Minority interests	0	0	0	0	0	Proceeds from issuance of convertible promissory notes	0	0	0	0	0
Net profit (Net loss)	(1,452)	580	(551)	(471)	(653)	Other financing activities	(1)	0	0	0	0
						Net cash from financing activities	153	3,652	0	0	0
						FX changes	15	0	0	0	0
						Net change in cash	(503)	3,890	(981)	(752)	(728)
						Cash at the beginning of the year	1,681	1,193	4,759	3,778	3,026
						Cash at the end of the year	1,193	4,759	3,778	3,026	2,298

Balance sheet

YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E	YE 31 Dec	FY19A	FY20A	FY21E	FY22E	FY23E
Non-current assets	376	990	1,090	1,190	1,290	Profit & loss ratios (%)					
PP&E	30	25	125	225	325	Gross margin	100	100	80	81	82
Operating lease right of use assets	16	15	15	15	15	EBITDA margin	N/A	N/A	(60.80)	(37.01)	(55.56)
Intangible assets	149	120	120	120	120	Net margin	N/A	N/A	(58.59)	(35.77)	(54.51)
Goodwill	163	163	163	163	163	Effective tax rate (%)	N/A	N/A	N/A	N/A	N/A
Other non-current assets	18	667	667	667	667						
Current assets	1,361	5,344	4,232	3,596	2,831	Balance sheet ratios					
Inventories	0	0	0	23	15	Current ratio (x)	2	9	37	71	74
Trade and bills receivables	0	130	0	93	63	Trade receivables turnover	N/A	N/A	90	90	90
Prepayments, other receivables	136	195	195	195	195	Trade payables turnover	N/A	N/A	180	180	180
Other financial assets	0	0	0	0	0	Total debt to asset ratio (%)	38	11	5	4	4
Cash and bank balances	1,137	4,759	3,778	3,026	2,298						
Current liabilities	588	576	116	51	38	Returns (%)					
Short-term borrowings	50	0	0	0	0	ROE	(136)	8	(11)	(10)	(17)
Advance from customers	0	0	0	0	0	ROA	(84)	7	(10)	(10)	(16)
Other payables and accruals	274	561	100	35	23						
Operating lease liabilities, current	7	8	8	8	8	Per share data					
Other current liabilities	258	8	8	8	8	EPS (RMB)	N/A	8.1	(7.7)	(6.6)	(9.1)
Non-current liabilities	80	131	131	131	131	DPS (RMB)	0.0	0.0	0.0	0.0	0.0
Convertible promissory notes	68	0	0	0	0	BVPS (RMB)	N/A	96.5	70.8	64.2	55.1
Onshore convertible loans	7	6	6	6	6						
Deferred subsidy income	4	0	0	0	0						
Total net assets	1,069	5,627	5,076	4,605	3,952						
Minority interest	0	0	0	0	0						
Shareholders' equity	1,069	5,627	5,076	4,605	3,952						

Source: Company data, CMBIS estimates

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