

#### 招商银行全资附属机构 A Wholly Owned Subsidiary Of China Merchants Ban

## **Kintor Pharmaceutical (9939 HK)**

# Proxalutamide may become an effective treatment for COVID-19

- First patient dosed in a pivotal phase 3 trial for COVID-19 outpatients in the US. Kintor obtained the IND approval for proxalutamide treating COVID-19 outpatients from the US FDA in Mar 2021. The first patient dosing was completed on 25 Apr 2021. This is a pivotal phase 3, randomized, double-blind, placebo-controlled, multi-regional pivotal trial, which is designed to evaluate the efficacy and safety of proxalutamide in male outpatients with mild or moderate COVID-19 symptoms, while the primary endpoint is hospitalization rate by Day 28. We expect this trial to have interim data readout in 3Q21E. Furthermore, we expect Kintor to initiate another global registrational phase III trial for hospitalized COVID-19 patients soon.
- Proxalutamide might be a better choice for COVID-19. To date, several therapies have been approved or granted EUA by the US FDA, including neutralizing mAbs, remdesivir, baricitinib + remdesivir, etc. For mild-to-moderate COVID-19 patients, cocktail neutralizing antibodies, such as bamlanivimab + etesevimab and casirivimab + imdevimab, can reduce the risk of hospitalization by 85% and 50%, respectively. In contrast, according to the IIT results, proxalutamide reduced the hospitalization risk by 100% (0% vs 27.3%) in male patients and 90% (1.7% vs 17.1%) in female patients, respectively. For hospitalized patients, remdesivir can reduce the hospital stay length by 5 days compared to placebo (10 days vs 15 days). Compared with remdesivir alone, remdesivir in combination with baricitinib can reduce the morality risk by 34% (4.7% vs 7.1%). In contrast, during the trial in Brazil, proxalutamide reduced the length of hospital stay by 9 days (5 days vs 14 days) and reduced mortality risk by 92% (3.7% vs 47.6%).
- Proxalutamide may become a blockbuster if approved for COVID-19. Existing COVID-19 treatments, such as neutralizing mAbs (bamlanivimab + etesevimab) and remdesivir, are priced at above US\$2,000 per cycle. Given proxalutamide's potential superior efficacy, we think proxalutamide can charge similar prices as neutralizing antibodies or remdesivir, under conservative scenarios. We expect the manufacture capacity of proxalutamide to reach 50mn tablets per month by 4Q21E, indicating potential 600mn tablets of annual production capacity in 2022E. With such capacity, proxalutamide will be able to cover 14mn to 21mn COVID-19 patients in 2022E.
- Maintain BUY. Considering the positive progress of Proxalutamide in treating COVID-19, we expect it will be approved by the US FDA for COVID-19 treatment in 2022E. Given the large sales potential in the US, we raise our FY22E/23E revenue forecast by 958%/913%, and raise our TP to HK\$92.08 based on 10-year DCF model (WACC: 9.7%, terminal growth rate: 3.0%). Risks: Clinical trial failure in proxalutamide for COVID-19; Delay in pipeline progress; Competition from peers.

Fa	rnir	an	Su	ım	ma	rv
$\Box a$		ıus	OU		IIIa	II V

(YE 31 Dec)	FY19A	FY20A	FY21E	FY22E	FY23E
Revenue (RMB mn)	0	0	0	9,783	8,082
Attributable net profit (loss) (RMB mn)	(233)	(508)	(457)	5,664	4,839
R&D expenses	(214)	(329)	(400)	(600)	(400)
EPS (RMB)	N/A	(1.64)	(1.24)	15.33	13.10
Consensus EPS (RMB)	N/A	N/A	(1.46)	(0.22)	0.31
ROE (%)	(63)	(34)	(44)	84	42
ROA (%)	(42)	(27)	(33)	74	39
Net gearing (%)	Net cash				
Current ratio (x)	1.5	8.4	5.2	9.6	19.7

Source: Company data, Bloomberg, CMBIS estimates

## **BUY (Maintain)**

Target Price HK\$92.08 (Previous TP HK\$38.88) Up/Downside +28.42% Current Price HK\$71.70

#### China Healthcare Sector

**Sam Hu, PhD** (852) 3900 0882 samhu@cmbi.com.hk

**Jill Wu, CFA** (852) 3900 0842 jillwu@cmbi.com.hk

Jonathan Zhao (852) 6359 1614 jonathanzhao@cmbi.com.hk

Mkt. Cap. (HK\$ mn)	26,485
Avg. 3mths t/o (HK\$ mn)	114.42
52W High/Low (HK\$)	82.00/7.20
Total Issued Shares (mn)	369
Source: Bloomberg	

Shareholding Structure

Management	34.03%
Pre-IPO & corner stone investors	34.07%
Free float	31.90%
Source: HKEx, Bloomberg	

Share performance

	Absolute	Relative
1-mth	122.1%	126.6%
3-mth	474.4%	493.7%
6-mth	940.9%	815.4%

Source: Bloomberg

## 12-mth price performance



Source: Bloomberg

Auditor: PWC Web-site: www.kintor.com.cn

#### Related report:

- Fast clinical progress for Proxalutamide and other core assets – 29 Mar 2021
- Enrollment completed for proxalutamide for hospitalized COVID-19 patients in Brazil 26 Feb 2021
- Promising clinical data from Proxalutamide on COVID-19 and GT90001 (ALK-1) on 2L HCC – 14 Dec 2020

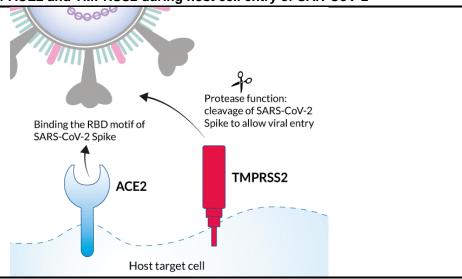
1



## Proxalutamide showed clear MoA in treating COVID-19

SARS-CoV-2 uses the SARS-CoV receptor ACE2 for host cell entry through spike protein's binding to ACE2, while transmembrane protease serine 2 (TMPRSS2) is a serine protease that primes the spike protein facilitates its entry into the host cell (See Fig. 1). Thus, both ACE2 and TMPRSS2 are essential for COVID-19's entry into normal cell and subsequent replication cycle. Inhibition or down-regulation of either ACE2 or TMPRSS2 might achieve protection from SARS-CoV-2.

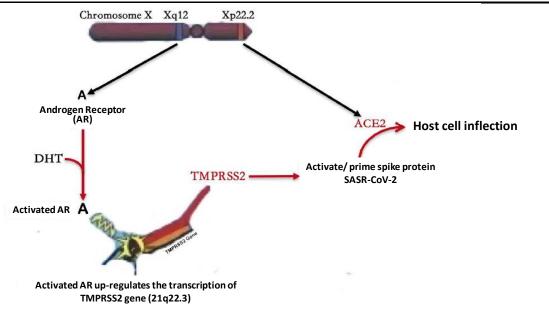
Figure 1: Function of ACE2 and TMPRSS2 during host cell entry of SAR-CoV-2



Source: InvivoGen, CMBIS

It was revealed that androgen-AR activation can induce the expression of ACE2 and TMPRSS2 under the androgen-dependent condition in cells. Targeting AR-ACE2/TMPRSS2 signal axis could originally inhibit the entry of the virus into host cells by transcriptionally down-regulating the expression of TMPRSS2 and ACE2. Thus, AR inhibitors, such as proxalutamide, have received growing attention as potential therapies for COVID-19. (*Preprint, SSRN, ID: ppcovidwho-1401*).

Figure 2: AR up-regulates the transcription of ACE2 and TMPRSS2 genes



Source: Company data, CMBIS

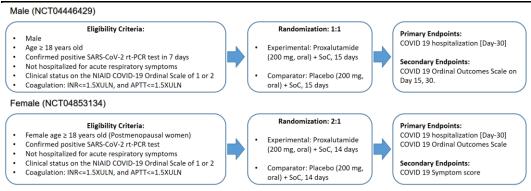


## Proxalutamide is under registrational trials in the US

In July 2020, Kintor achieved a clinical trial research agreement with Applied Biology, a US based biotech company, pursuant to which Kintor engages Applied Biology to conduct research for proxalutamide as a treatment for COVID-19 in Brazil. Thus, proxalutamide has been assessed in a few investigator-initiated trials (IIT) in Brazil for both mild-to-moderate COVID-19 patients and hospitalized COVID-19 patients.

For mild-to-moderate COVID-19 patients, two trials have been completed in Brazil, including one trial on male patients (NCT04446429) and another one on female patients (NCT04853134).

Figure 3: Clinical trials design for male and female COVID-19 outpatients in Brazil



Source: Company data, CMBIS

In Jan 2021, Kintor released the final results for male patients with mild-to-moderate COVID-19, which enrolled a total of 262 male patients (134 in proxalutamide arm vs 128 in control arm). The results showed that the hospitalization rate, percentages of ICU usage, mechanical ventilation usage and death within 30 days in the Proxalutamide arm were 0%, 0%, 0% and 0%, respectively, compared to 27.3%, 14.1%, 10.2% and 1.6% of which in the control arm, indicating that Proxalutamide could significantly inhibit the transition of condition of male patients infected with COVID-19 from mild to severe and had good safety for short-term administration (15 days).

In Jan 2021, Kintor also released the interim results for female patients with mild-to-moderate COVID-19 (60 in proxalutamide arm vs 35 patients in control arm), which showed that the hospitalization rate, percentages of ICU usage, mechanical ventilation usage and death in 30 days in the proxalutamide arm were 1.7%, 0%, 0% and 0%, respectively, compared to 17.1%, 8.6%, 5.7% and 2.9% of which in the control arm. Although the female patients have lower androgen and AR expression as compared to the male patients, proxalutamide could still significantly inhibit the disease progression of female patients with mild-to-moderate COVID-19.



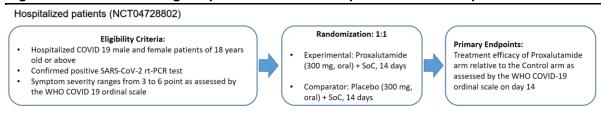
Figure 4: Results of proxalutamide in COVID-19 outpatients in Brazil

Mala	Proxalutamide arm (n=134)		Contro	ol arm (n=128)
Male	Cases	Percentage	Cases	Percentage
Hospitalization	0	0%	35	27.3%
Admission to ICU	0	0%	18	14.1%
Mechanical ventilation requirement	0	0%	13	10.2%
Death	0	0%	2	1.6%
Female	Proxalutamide arm (n=60)		Contro	ol arm (n=35)
remale	Cases	Percentage	Cases	Percentage
Hospitalization	1	1.7%	6	17.1%
Admission to ICU	0	0%	3	8.6%
Mechanical ventilation requirement	0	0%	2	5.7%
Death	0	0%	1	2.9%

Source: Company data, CMBIS

For hospitalized COVID-19 patients, proxalutamide completed another IIT in Brazil (NCT04728802, also named as Proxa-Rescue AndroCoV Trial). In Feb 2021, the trial completed enrollment of 590 hospitalized COVID-19 patients, including 294 patients (56.8% male) in the proxalutamide arm and 296 patients (57.8% male) in the control arm.

Figure 5: Clinical trial design of proxalutamide for hospitalized COVID-19 patients in Brazil



Source: Company data, CMBIS

In Mar 2021, Kintor released the results of proxalutamide in hospitalized COVID-19 patients in Brazil, which met the primary endpoint at day 14, demonstrating a reduction of 4.01 in WHO COVID-19 ordinal scale from a baseline of 5.663 to 1.653 in the Proxalutamide arm versus a reduction of 0.25 from a baseline of 5.618 to 5.368 in the control arm (p<0.0001). Proxalutamide also demonstrated a reduction in mortality risk by 92% (3.7% in proxalutamide arm vs 47.6% in control arm) and shortened median hospital length stay by 9 days (median hospital stay of 5 days in proxalutamide arm vs 14 days in control arm).

Figure 6: Results of proxalutamide in hospitalized COVID-19 patients in Brazil

WHO COVID 19 ordinal scale	Proxalutamide arm (n=294)	Control arm (n=296)
Day 0 (baseline)	5.663	5.618
Day 14	1.653	5.368
Change (p value < 0.0001)	-4.01	-0.25

	Proxalutami	de arm (n=294)	Control arm (n=296)	
	Cases	Percentage	Cases	Percentage
Mortality	11	3.7%	141	47.6%
Median hospital length stay (days)	5 (	days	14 d	ays
New mechanical ventilation (MV) and/or death	13	4.4%	156	52.7%
Discharged from hospital	262	89.1%	97	32.8%

Source: Company data, CMBIS



## Registrational trials in the US

Given the superior efficacy data of proxalutamide exhibited in Brazil's trial for both outpatients and hospitalized patients, Kintor has obtained the approval from the US FDA to start a registrational phase III clinical trial of proxalutamide for the treatment of male patients with mild or moderate COVID-19 symptoms in Mar 2021.

The pivotal phase III trial is a randomized, double-blind, placebo-controlled, multi-regional trial, designed to evaluate the efficacy and safety of proxalutamide in male outpatients with mild or moderate COVID-19 symptoms, and the primary endpoint is hospitalization rate by Day 28. Recently, on 25 Apr 2021, Kintor has completed the first patient enrollment and dosing for this trial. We expect interim data readout in 3Q21E.

Furthermore, we expect Kintor to initiate another global registrational phase III trial for hospitalized COVID-19 patients soon.

**Experimental: Primary Endpoints:** Proxalutamide 200 mg, oral, QD, Eligibility Criteria: for continuous 14 days, COVID-19 hospitalization · Confirmed positive plus Physician's treatment choice [28 days] SARS-CoV-2 rt-PCR test Secondary Endpoints:  $\mathbb{R}^2$ · Not hospitalized for 1) All-cause mortality [28 1:1 acute respiratory days]; symptoms 2) COVID-19 Ordinal Comparator: · Age ≥18 years old Outcomes Scale on Day 14, Placebo 200 mg, oral, QD, for • Male continuous 14 days, plus Physician's treatment choice

Figure 7: Ph3 trial design for male COVDI-19 outpatients in the US

Source: Company data, CMBIS



## Competitive landscape of COVID-19 therapeutic drugs

Amid the current COVID-19 pandemic, a variety of therapeutic treatments are being developed or repurposed to combat COVID-19. Several neutralizing monoclonal antibodies and small molecule drugs, or their combinations, have been approved or granted EUA, making them research hotspots.

## **Neutralizing monoclonal antibodies**

Several neutralizing monoclonal antibodies to SARS-CoV-2 are evaluated in clinical trials. The US FDA has granted EUA for two antibodies therapies for treatment of mild-to-moderate COVID-19 patients at high risk for progressing to severe COVID-19 and/or hospitalization, including LY-CoV555+LY-CoV016 (bamlanivimab + etesevimab), LYCoV555 (bamlanivimab, revoked on 21 Apr 2021), REGEN-COV2 (casirivimab + imdevimab). In addition, several antibodies are at late-stage clinical trials assessing their potential for treating COVID-19, including CT-P59, VIR-7831/GSK4182136, TY027, AZD7442, etc.

Figure 8: Neutralizing monoclonal antibodies for the treatment of COVID-19

Sponsors	Therapies	Regimen	Target	Latest status
Eli Lilly and AbCellera	Bamlanivimab (LY-CoV555)	Mono	Spike protein	EUA revocation for bamlanivimab monotherapy on 21 Apr 2021
Eli Lilly and Junshi Biosciences	Combination of bamlanivimab (LY-CoV555) and etesevimab (JS016 / LY-CoV016)	Cocktail	Spike protein + RBD	EUA for mild-to-moderate COVID-19 patients
Regeneron	Combination of casirivimab and imdevimab (REGN-COV2)	Cocktail	Spike protein	EUA received in Nov 2020
Celltrion (Regdanvimab)	Regdanvimab (CT-P59)	Mono	SARS-CoV-2	EUA received in EMA and South Korea (Phase III)
Vir Biotechnology and GSK	VIR-7831/GSK4182136	Mono	SARS-CoV-2	EUA submitted to FDA and EMA
Tychan Pte Ltd	TY027	Mono	SARS-CoV-2	Phase III
AstraZeneca	AZD7442 (AZD8895 and AZD1061)	Cocktail	SARS-CoV-2	Phase III
Brii Biosciences	BRII-196/BRII-198	Cocktail	SARS-CoV-2	Phase III
Sinocelltech	SCTA01	Mono	RBD	Phase II/III
Sab Biotherapeutics	SAB-185	Mono	SARS-CoV-2	Phase II/III
Beigene	DXP-593	Mono	Spike protein	Phase II
Sorrento Therapeutics	COVI-AMG (STI-2020)	Mono	SARS-CoV-2	Phase II
Mabwell (Shanghai) Bioscience	MW33	Mono	SARS-CoV-2	Phase II
Eli Lilly/ AbCellera Junshi Biosciences Vir Biotechnology/ GSK	LY-CoV1404 / LY-CoV1404+LY-CoV555+LY-CoV016 / LY-CoV555+VIR-7831	Mono / Cocktail	Spike protein/ RBD	Phase II
University of Cologne and BI	DZIF-10c (BI 767551)	Mono	SARS-CoV-2	Phase I/II
COR-101	Corat Therapeutics	Mono	Spike protein	Phase I/II
HiFiBiO Therapeutics	HFB30132A	Mono	Spike protein	Phase I Phase I/II pending in Russia
Hengenix Biotech / He	HLX70	Mono	SARS-CoV-2	Phase I
AbbVie	ABBV-47D11	Mono	SARS-CoV-2	Phase I
Beigene	DXP-604	Mono / Cocktail	Spike protein	Phase I
Sorrento Therapeutics	COVI-GUARD (STI-1499)	Mono	SARS-CoV-2	Phase I
Ology Bioservices	ADM03820	Cocktail	SARS-CoV-2	Phase I

Source: Company data, CMBIS (As of 3 May 2021)

## Other therapies for COVID-19

Besides neutralizing mAbs, other therapies are either approved or under research for treatment of COVID-19. As for small molecules, Veklury (remdesivir) was approved by the US FDA for treating adults and pediatric hospitalized patients with COVID-19 in Oct 2020. The US FDA granted EUA for remdesivir in combination with Olumiant (baricitinib, a JAK1/JAK2 inhibitor) for treatment of hospitalized patients with COVID-19 requiring



supplemental oxygen, invasive mechanical ventilation or extracorporeal membrane oxygenation (ECMO) in Nov 2020. Dexamethasone is indicated for ICU patients with COVID-19, according to the COVID-19 Treatment Guidelines by the US FDA. In addition, many other therapies, such as anti-inflammatory biologics, small molecule drugs and TCMs, are being evaluated for treating COVID-19 in various countries.

## Proxalutamide showed superior preliminary efficacy compared with approved COVID-19 therapies

To date, several therapies have been approved or granted EUA by the US FDA, including neutralizing mAbs, remdesivir, baricitinib + remdesivir, etc.

<u>For mild-to-moderate COVID-19 patients</u>, cocktail neutralizing antibodies, such as bamlanivimab + etesevimab and casirivimab + imdevimab, can reduce the risk of hospitalization by 85% and 50%, respectively. In contrast, according to the IIT results, proxalutamide reduced the hospitalization risk by 100% (0% vs 27.3%) in male patients and 90% (1.7% vs 17.1%) in female patients, respectively.

Figure 9: Efficacy comparison of approved treatments and proxalutamide for COVID-19 outpatients

Compounds	Туре	Status	Indications	Efficacy
Bamlanivimab; + Etesevimab	Neutralizing mAbs	EUA (10 Feb 2021)	Mild to moderate outpatients	Hospitalizations rate: 0.9% vs 5.8% (Day-29)
Bamlanivimab	Neutralizing mAb	EUA (09 Nov 2020) ( <i>Revoked on 21 Apr 2021</i> )	Mild to moderate outpatients	Hospitalizations rate: 1.6% vs 6.3% (Day-29)
REGN-COV2 (casirivimab + imdevimab)	Neutralizing mAbs	EUA (21 Nov 2020)	Mild to moderate outpatients	Hospitalizations or emergency department visits: 2% vs 4% (post hoc analyses) Absolute risk reduction: 3% vs 9% (high-risk patients)
CT-P59	Neutralizing mAb	EUA in South Korea (05 Feb 2021)	Mild to moderate outpatients	Reduction of progression to severe COVID-19: Overall: 54% 50+ years-old: 68%
Proxalutamide	Small molecule	Phase III in the US; IIT for outpatients in Brazil	Mild to moderate outpatients	Outpatients in Brazil: Hospitalizations rate: 0.0% vs 27.3% (Male. Day-30) Hospitalizations rate: 1.7% vs 17.1% (Female. Day- 30)

Source: FDA, Company data, CMBIS

<u>For hospitalized patients</u>, remdesivir can reduce the hospital stay length by 5 days compared to placebo (10 days vs 15 days). Compared with remdesivir alone, remdesivir in combination with baricitinib can reduce the morality risk by 34% (4.7% vs 7.1%). In contrast, during the trial in Brazil, proxalutamide reduced the length of hospital stay by 9 days (5 days vs 14 days) and reduced mortality risk by 92% (3.7% vs 47.6%).

Figure 10: Efficacy comparison of approved treatments and proxalutamide for COVID-19 hospitalized patients

Compounds	Туре	Status	Indications	Efficacy
Remdesivir	Small molecule	FDA full approval (22 Oct 2020)	Hospitalized patients	Median hospital stay days: 10 vs 15
Remdesivir + Baricitinib	Small molecules	EUA (09 Nov 2020)	Hospitalized patients	Median hospital stay days: 7 (mono) vs 8 (combo) Mortality: 4.7% (combo) vs 7.1% (mono)
Proxalutamide	Small molecule	IIT for hospitalized patients in Brazil	Hospitalized patients	Hospitalized patients in Brazil: Median hospital stay days: 5 vs 14 Mortality: 3.7% vs 47.6% WHO COVID-19 ordinal scale: -4.01 vs -0.25

Source: FDA, Company data, CMBIS



## Assess proxalutamide's sales potential in COVID-19

Existing COVID-19 treatment, such as neutralizing mAbs (bamlanivimab + etesevimab) and remdesivir are priced at above US\$2,000 per cycle. Given proxalutamide's potential superior efficacy, we think proxalutamide can charge similar prices as neutralizing antibodies or remdesivir, under conservative scenarios.

We expect the manufacture capacity of proxalutamide to reach 50mn tablets per month by 4Q21E, indicating potential 600mn tablets of annual production capacity in 2022E. With such capacity, proxalutamide will be able to cover 14mn to 21mn COVID-19 patients in 2022E.

Figure 11: Pricing of major approved treatments for COVID-19 in the US

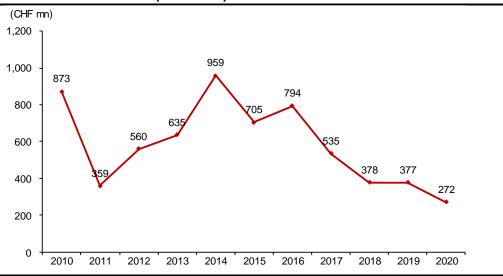
Therapies	Status	Indications	Regimens	Price per cycle
Bamlanivimab + etesevimab	EUA (10 Feb 2021)	Mild to moderate outpatients	700mg/20ml/vial x 1 vial (IV) + 700mg/20ml/vial x 2 vials (IV)	US\$2,100 <sup>(1)</sup> (US government purchase)
Remdesivir	FDA full approval (22 Oct 2020)	Hospitalized patients	100mg/20ml/vial x 6 vials (IV)	US\$2,340-US\$3,120 <sup>(2)</sup> (US, based on insurance)
Proxalutamide	Phase III in the US IIT for outpatients in Brazil IIT for hospitalized patients in Brazil	Mild to moderate outpatients Mild to moderate outpatients Hospitalized patients	Mild to moderate outpatients: 200mg QD x 14 days Hospitalized patients: 300mg QD x 14 days	NA

Source: FDA, Company data, CMBIS; Notes: 1) www.globenewswire.com; 2) www.clinicaltrialsarena.com

Eli Lily (LLY US, NR)'s neutralizing mAbs, including bamlanivimab monotherapy and the combo-therapy of bamlanivimab and etesevimab, achieved US\$810mn global sales in 1Q21, implying sales volume of approximately 385,000 doses. Given proxalutamide's promising efficacy and convenience of oral administration, we see large sales potential in proxalutamide, if approved.

In view of the volatility of the COVID-19 pandemic all around the world, there's a risk that COVID-19 may exist for a long time like influenza. Tamiflu (Oseltamivir) has been an effective and widely-adopted anti-viral treatment for influenza. We think proxalutamide also has the potential to become a convenient and effective therapy for COVID-19. Before the patent expiry in 2017, global sales of Tamiflu peaked in 2014 at CHF959mn (equivalent to approximately US\$1,050mn).

Figure 12: Global sales of Tamiflu (2010-2020)



Source: Roche's financial report, CMBIS



## **Valuation**

We use DCF method to value the Company and we derive TP of HK\$92.08 based on 10-year risk-adjusted DCF model (WACC: 9.7%, terminal growth rate: 3.0%).

Figure 13: Risk-adjusted DCF valuation

DCE Valuation (in Drob ma)		2024E	2022E	2022E	2024E	20255	2026E	2027E	2020E	20205	20205
DCF Valuation (in Rmb mn)		2021E	2022E	2023E	2024E	2025E		2027E	2028E	2029E	2030E
EBIT		(465)	6,622	5,581	3,756	2,848	2,541	2,365	2,359	2,375	2,453
Tax rate		0%	15%	15%	15%	15%	15%	15%	15%	15%	15%
EBIT*(1-tax rate)		(465)	5,629	4,744	3,193	2,421	2,160	2,010	2,005	2,019	2,085
+ D&A		12	17	21	25	28	31	34	37	40	42
- Change in working capital		0	(640)	(181)	(152)	71	52	49	16	(9)	(20)
- Capex		(100)	(80)	(80)	(80)	(80)	(80)	(80)	(80)	(80)	(80)
FCFF		(553)	4,926	4,504	2,985	2,439	2,163	2,013	1,978	1,970	2,027
Terminal value											31,281
FCF + Terminal value		(553)	4,926	4,504	2,985	2,439	2,163	2,013	1,978	1,970	33,308
Present value of enterprise	27,933										
Net Debt	(298)										
Minorities	0										
Equity value (RMB mn)	28,231										
Equity value (HK\$ mn)	34,013										
Equity value (US\$ mn)	4,389										
Target price (HK\$)	92.08										
Terminal growth rate											
WACC											
Cost of Equity	3.0%										
Cost of Debt	9.7%										
Equity Beta	12.0%										
Risk Free Rate	5.0%										
Market Risk Premium	0.9										
Target Debt to Asset ratio	3.0%										
Effective Corporate Tax Rate	10.0%										

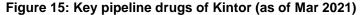
Source: CMBIS estimates

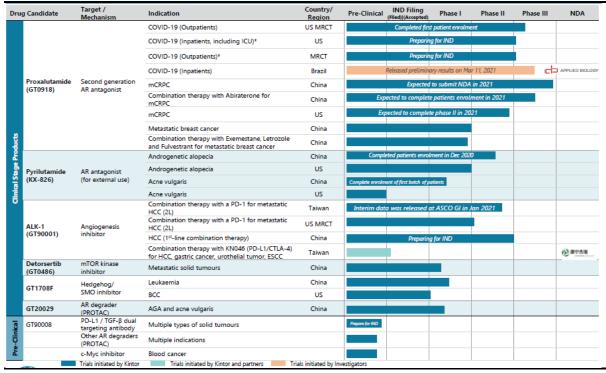
Figure 14: Sensitivity analysis (HK\$)

				WACC		
		8.5%	9.0%	9.5%	10.0%	10.5%
	4.0%	117.79	107.89	99.68	92.76	86.85
	3.5%	111.33	102.78	95.57	89.41	84.07
Terminal growth rate	3.0%	106.00	98.50	92.08	86.52	81.67
	2.5%	101.54	94.86	89.07	84.01	79.55
	2.0%	97.75	91.72	86.46	81.81	77.68

Source: Company data, CMBIS estimates







Source: Company data, CMBIS; Notes: mCRPC = metastatic castration resistant prostate cancer, MRCT = Multi Regional Clinical Trial, HCC = hepatocellular carcinoma, BCC = basal cell carcinoma, PROTAC = proteolysis targeting chimera, ESCC = Esophageal squamous cell carcinoma, \* Subject to regulators' approval

Figure 16: CMBIS estimates revision

		Old		Diff (%)					
RMB mn	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E
Revenue	0	9,783	8,082	0	924	798	N/A	958%	913%
Gross Profit	0	7,827	6,546	0	739	646	N/A	958%	913%
Operating Profit	(449)	6,672	5,702	(389)	331	252	N/A	1916%	2164%
Net profit	(457)	5,664	4,839	(397)	274	207	N/A	1969%	2243%
EPS (RMB)	(1.24)	15.33	13.10	(1.08)	0.74	0.56	N/A	1969%	2243%
Gross Margin	N/A	80.00%	81.00%	N/A	80.00%	81.00%	N/A	+0.00 ppt	+0.00 ppt
Operating Margin	N/A	68.20%	70.55%	N/A	35.81%	31.57%	N/A	+32.39 ppt	+38.99 ppt
Net Margin	N/A	57.89%	59.88%	N/A	29.62%	25.89%	N/A	+28.27 ppt	+33.99 ppt

Source: Company data, CMBIS estimates

Figure 17: CMBIS estimates vs consensus

		CMBIS		С	onsensus			Diff (%)	
RMB mn	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E	FY21E	FY22E	FY23E
Revenue	0	9,783	8,082	40	606	1,056	N/A	1514%	665%
Gross Profit	0	7,827	6,546	28	509	903	N/A	1438%	625%
Operating Profit	(449)	6,672	5,702	(567)	9	194	N/A	78395%	2847%
Net profit	(457)	5,664	4,839	(538)	(89)	116	N/A	-6440%	4069%
EPS (RMB)	(1.24)	15.33	13.10	(1.46)	(0.22)	0.31	N/A	-7069%	4195%
Gross Margin	N/A	80.00%	81.00%	70.00%	84.00%	85.50%	N/A	-4.00 ppt	-4.50 ppt
Operating Margin	N/A	68.20%	70.55%	-1435.44%	1.40%	18.32%	N/A	+66.80 ppt	+52.23 ppt
Net Margin	N/A	57.89%	59.88%	-1362.87%	-14.74%	10.99%	N/A	+72.63 ppt	+48.89 ppt

Source: Company data, CMBIS estimates



## **Financial Statements**

Income statement	Cash flow summary											
YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E	YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E	
Revenue	0	0	0	9,783	8,082	Profit before tax	(233)	(508)	(457)	6,663	5,693	
Proxalutamide China sales – risk adjusted	0	0	0	34	213	Depreciation and amortization, etc.	5	7	12	17	21	
Proxalutamide US sales - risk adjusted	0	0	0	9,703	7,757	Change in working capital	0	(13)	0	(640)	(181)	
Pyrilutamide China sales - risk adjusted	0	0	0	46	105	Others	(0)	134	(1)	(1,000)	(855)	
Pyrilutamide US sales - risk adjusted	0	0	0	0	6	Net income tax paid	0	(0)	0	(999)	(854)	
ALK-1 China sales - risk adjusted	0	0	0	0	0	Operating cash flow	(228)	(381)	(446)	5,040	4,679	
Others	0	0	0	0	0							
Cost of sales	0	0	0	(1,957)	(1,536)	Purchase of PP&E	(67)	(69)	(100)	(80)	(80)	
Gross profit	0	0	0	7,827	6,546	Purchase of land use right	0	0	0	0	0	
·						Purchases of financial assets at FV through profit or loss	0	(253)	0	0	0	
Other income	19	25	31	65	136	Purchases of financial assets measured at amortized cost	(55)	0	0	0	0	
Selling & distribution expenses	(33)	(77)	(80)	(587)	(485)	Others	115	(118)	0	0	0	
R&D expenses	(214)	(329)	(400)	(600)	(400)	Investing cash flow	(7)	(440)	(100)	(80)	(80)	
Administrative expenses	(0)	(9)	Ò	(32)	(96)	_						
Other expenses	(1)	(116)	0	0	0	Proceeds from borrowings	59	239	0	0	0	
Operating profit (loss)	(229)	(505)	(449)	6,672	5,702	Repayments of borrowings	(65)	(79)	0	0	0	
Finance costs	(4)	(3)	(9)	(9)	(9)	Capital contribution from equity holders	348	1,653	0	0	0	
Pre-tax profit (loss)	(233)	(508)	(457)	6,663	5,693	Others	(46)	(32)	0	0	0	
i io tan prom (iooo)	(,	(,	( - ,	.,	-,	Financing cash flow	296	1.780	0	0	0	
Income tax	0	(0)	0	(999)	(854)	J		•				
Minority interests	0	Ò	0	Ò	Ó	FX changes	(3)	(91)	0	0	0	
Attributable net profit (loss)	(233)	(508)	(457)	5,664	4,839	Net change in cash	61	960	(546)	4,960	4,599	
	. ,	. ,	. ,	•	•	Cash at the beginning year	138	196	1,066	519	5,480	
						Cash at the end	196	1,065	519	5,480	10,079	

Balance sheet						Key ratios					
YE 31 Dec (RMB mn)	FY19A	FY20A	FY21E	FY22E	FY23E	YE 31 Dec	FY19A	FY20A	FY21E	FY22E	FY23E
Non-current assets	333	431	520	583	643	Sales mix (%)					
PP&E	98	175	265	330	390	Proxalutamide China sales adjusted	0	0	0	0	3
Intangible assets	179	210	210	209	209	Proxalutamide US sales	0	0	0	99	96
Right-of-use assets	14	12	11	10	9	Pyrilutamide China sales - adjusted	0	0	0	0	1
Other non-current assets	41	34	34	34	34	Pyrilutamide US sales	0	0	0	0	0
						ALK-1 China sales -	0	0	0	0	0
Current assets	221	1,421	873	7,036	11,677	Others	0	0	0	0	0
Inventories	0	0	0	161	168	Total	100	100	100	100	100
Trade receivables	0	0	0	804	886						
Other receivables and prepayments	25	32	30	268	221	Profit & loss ratios (%)					
Financial assets at FV through P&L	0	0	0	0	0	Gross margin	N/A	N/A	80	80	81
Cash and cash equivalents	196	1,066	519	5,480	10,079	EBITDA margin	N/A	N/A	N/A	68	69
Restricted cash	0	0	0	0	0	Pre-tax margin	N/A	N/A	N/A	68	70
						Net margin	N/A	N/A	N/A	58	60
Non-current liabilities	41	174	174	174	174	Effective tax rate	0	0	0	15	15
Borrowings	0	135	135	135	135						
Lease liabilities	2	0	0	0	0	Balance sheet ratios					
Deferred income tax liabilities	39	39	39	39	39	Current ratio (x)	2	8	5	10	20
						Net debt to equity (%)	Net cash				
Current liabilities	143	169	168	731	593						
Trade and other payables	80	81	80	643	505	Returns (%)					
Borrowings	59	84	84	84	84	ROE	-63	-34	-44	84	42
Lease liabilities	3	3	3	3	3	ROA	-42	-27	-33	74	39
Deferred income	1	0	0	0	0						
Amounts due to related parties	0	1	1	1	1	Per share value					
						EPS (RMB)	N/A	(1.64)	(1.24)	15.33	13.10
Total net assets	370	1,508	1,050	6,714	11,554	DPS (RMB)	N/A	0.00	0.00	0.00	0.00
Minority interest	0	0	0	0	0	BVP (RMB)	N/A	4.87	2.84	18.18	31.28
Shareholders' equity	370	1,508	1,050	6,714	11,554						

Source: Company data, CMBIS estimates



## **Disclosures & Disclaimers**

## **Analyst Certification**

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.

Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

#### **Disclosure**

CMBIS or its affiliate(s) have investment banking relationship with the issuers covered in this report in preceding 12 months.

#### **CMBIS** Ratings

BUY : Stock with potential return of over 15% over next 12 months HOLD : Stock with potential return of +15% to -10% over next 12 months Stock with potential loss of over 10% over next 12 months SELL

NOT RATED : Stock is not rated by CMBIS

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

#### CMB International Securities Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Securities Limited ("CMBIS") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

### Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIS does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIS recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.

This report or any information contained herein, have been prepared by the CMBIS, solely for the purpose of supplying information to the clients of CMBIS or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIS nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report does so entirely at their own risk.

The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIS has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIS provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIS may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIS may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIS may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIS does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIS may have a conflict of interest that could affect the objectivity of this report and CMBIS will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIS. Additional information on recommended securities is available upon request.

## For recipients of this document in the United Kingdom

This report has been provided only to persons (I)falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time) ("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc..) of the Order, and may not be provided to any other person without the prior written consent of CMBIS.

### For recipients of this document in the United States

CMBIS is not a registered broker-dealer in the United States. As a result, CMBIS is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not affected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

#### For recipients of this document in Singapore

This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.