

# Kintor Pharma

Developing Novel Drugs and Commercialization Platform

# Accomplishments since 2021



# Out-licensing

## **Accomplish Kintor's First Sales** Revenue RMB34.23M in 2021

- Upfront payment of out-licensing contract with Fosun Pharma in India and 28 African countries
- Upfront payment of out-licensing contract with Etana in Indonesia

# **FOSUN** PHARMA **复星医药**





# **Global Innovation**

# **Pioneer of Chinese Innovative Drugs' Globalization**

- **3** phase III MRCTs were approved by various countries' administration (FDA included)
- 4 drug candidates (pruxelutamide) pyrilutamide, ALK-1 antibody, GT20029) have clinical trials carried out within and out of China.



# 

# 10 Clinical Trials Moved to Phase III/II Stage

Pruxelutamide

3 phase III MRCTs for COVID-19

Pyrilutamide

1 phase III trial for male AGA in China

1 phase II trial for female AGA in China

1 phase II trial for male AGA in the U.S.

1 phase II trial for acne in China

• ALK-1 antibody

1 phase II trial for HCC in the U.S.

1 combotherapy trial with PD-1 for HCC in China

1 combotherapy trial with KN046 for various tumors in Taiwan

# **2** Drug Candidates Moved to Clinical Stage

- AR-PROTAC compound (GT20029)
- PD-L1/TGF-β dual-target antibody



# Data Release

### **Pruxelutamide**

• Annouced top-line results of the us & intl phase III study for outpatients



# Capacity Building

# **Growing Self-owned Capacity**

- Achieved 1M courses/month in pruxelutamide and by the end of 2022, and expects **50M courses/year**.
- Suzhou factory passed QP audit of EU, and set up tinctures and gels production line, and obtained drug production license.



# Capital Market

# Top-up Placement and Heng Seng Composite Index Included

- Completed a top-up placement and raised HK\$1.16 billion (\$150M)
- The stock was included in **HSCI** and the HK Stock Connect



# Outlook for 2022~2023

Data Release

#### **Pruxelutamide**

• The COVID-19 phase III MRCT for outpatient (NCT04869228) will release its interim analysis data in H2 2022.

### Pyrilutamide

- · Phase II data of male AGA in China will be released by the leading PI at a dermotology symposium in June 2022.
- · Phase II data of female AGA in China will be released in Q4 2022.

Clinical Progress

## Pyrilutamide

Patient enrollment will complete for the phase III male AGA and phase II acne clinical trial in China in H1 2022.

#### GT20029

Complete all patient enrollment and dosing for phase I clinical trial in China and the U.S. in 2022.

#### GT90008

Complete FPI for the phase I clinical trial in China in H2 2022



# NDA application and commercial production (GMP)

- · COVID-19 indication
- · AGA indication
- · Large scale production of pruxelutamide tablets in Suzhou base



\*FPI: first patient in

# **Table of Contents**

01	Company Overview
02	Introduction of Candidates in Clinical Stage
03	Our Strategies
04	Financial Overview





Section 1

# **Company Overview**

# Kintor at a Glance



## 2009

Established as Suzhou Kintor by Dr. Tong and Dr. Guo



# Oncology & AR-Focused<sup>1</sup>

Focused on oncology AR-related diseases with substantial unmet medical needs



# 7+N Pipeline

Small molecule & biological drugs: 7 potential first/best-in-class in clinical, N in pre-clinical



COVID-19, fastest growing cancers (prostate, breast & liver) globally, and other AR-related indications like AGA<sup>2</sup> and acne vulgaris





# **Geographic Expansion**

Potentially leveraging our global relationships to license-out select products for rapid global expansion in the future



# **Pruxelutamide**

Our lead product, indications in COVID-19, prostate cancer, and breast cancer



# **Pyrilutamide**

Indications in androgenetic alopecia and acne vulgaris, phase II trial in China for AGA met primary endpoints, and phase III is ongoing



# **ALK-1 antibody**

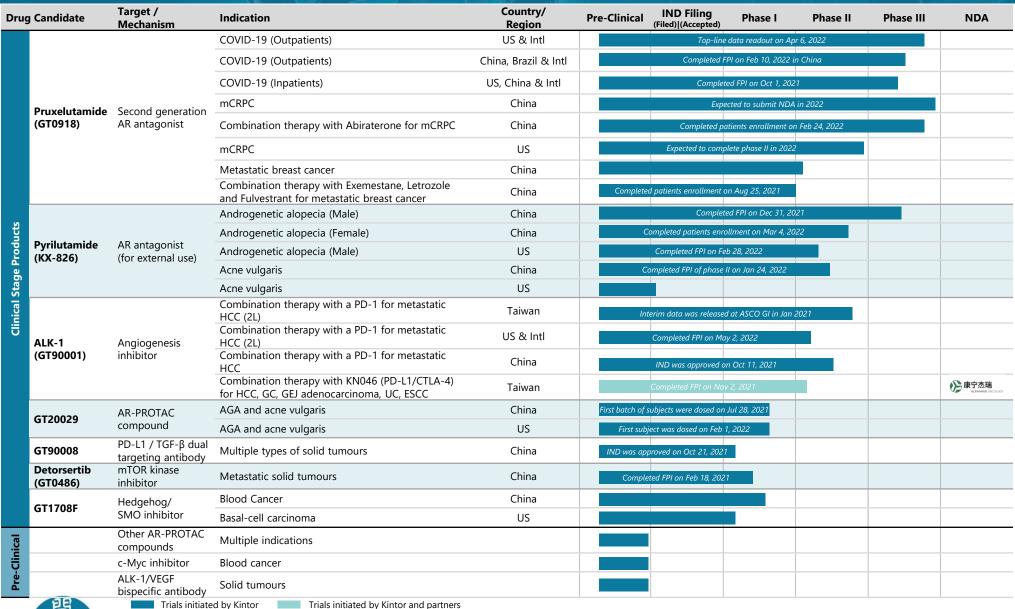
A new anti-angiogenesis inhibitor, positive data of HCC phase II trial in Taiwan, conducting trials in China and US



Note:

1 AR refers to androgen receptor 2. AGA:androgenetic alopecia

# **Products Pipeline**





FPI= First patient in, HCC = hepatocellular carcinoma, GC = gastric carcinoma, GEJ = gastroesophageal junction, UC= urothelial carcinoma, ESCC = esophageal squamous cell carcinoma

# The US & Intl Phase III Study for Outpatients

# **GT0918-US-3001 (***NCT04870606***)** Sample Size: 733

## Eligibility Criteria:

- First positive SARS-CoV-2 viral infection determination ≤3 days prior to start of the first dose
- Have one or more mild or moderate symptom(s) within 5 days of onset
- Not hospitalized for acute respiratory symptoms (NIAID 8-point score in 7 and 8)
- Age ≥18 years old
- Male and female<sup>1</sup>

# Experimental:

**Pruxelutamide** 200 mg, oral, QD, for continuous 14 days plus physician's treatment choice

### Control:

**Placebo** 200 mg, oral, QD, for continuous 14 days plus physician's treatment choice

## Primary Endpoints:

 Percentage of who experienced hospitalization or required oxygen, or death by Day 28

## **Secondary Endpoints:**

- Clinical status of subjects: hospitalization rate by Day 28; requiring oxygen rate; mortality rate; days in ICU, etc.
- Percentage of subjects achieving each clinical status on Days 7, 14 and 28 (NIAID 8-point scoring scale)
- Changes of viral load

Safety, etc.

## **Countries and regions:**

The United States, South America, EU, India, etc.

FDA greenlighted to conduct on Mar 4, 2021

1:1

Commenced patients enrolment on April 24, 2021

IND was
approved by
ANVISA on
Jul 19, 2021
in Brazil

Announced interim analysis on Dec 27, 2021



Announced top-line results on Apr 6, 2022

\*NIAID 8-point scoring scale: By National Institute of Allergy and Infectious Diseases, 1) Death; 2) Hospitalized, on invasive mechanical ventilation or extracorporeal membrane oxygenation (ECMO); 3) Hospitalized, on non-invasive ventilation or high flow oxygen devices; 4) Hospitalized, requiring supplemental oxygen; 5) Hospitalized, not requiring supplemental oxygen; not requiring ongoing medical care (COVID-19 related or otherwise); 6) Hospitalized, not requiring supplemental oxygen - no longer requires ongoing medical care; 7) Not hospitalized, limitation on activities and/or requiring home oxygen; 8) Not hospitalized, no limitations on activities.



Note: 1. FDA agreed to include female patients on May 17, 2021

# The US & Intl Phase III Study for Outpatients Top-line Data

# Efficacy:

## Pruxelutamide effectively reduced the risk of hospitalization/death by Day28

Subjects	Hospitalized subjects(death included)	Protection rate
with at least one day of study treatment(N=730)	8 (including 1 death) in placebo group VS 4 (no death) in Pruxelutamide group	50%
with more than 1 day of treatment(N=721)	7 (including 1 death) in placebo group VS 2 (no death) in Pruxelutamide group	71%
with more than 7 days of treatment(N=693)	6 (including 1 death) in placebo group VS 0 (no death) in Pruxelutamide group * p < 0.02	100%

# > Pruxelutamide significantly reduced the risk of hospitalization/death in subjects with high risk factors, especially medium to high age group

Within subjects aged  $\geq$ 50 years with obesity, $\geq$ 60 years with or without underlying medical conditions and  $\geq$ 60 years with at least one underlying medical condition (such as obesity, diabetes, hypertension, etc.), pruxelutamide significantly reduced the risk of hospitalization or death by 100% (p<0.02).

# Pruxelutamide significantly and continously reduced SARS-CoV-2 viral load

As compared to the control group, pruxelutamide significantly and continuously reduced SARS-CoV-2 viral load from Day 3 to Day 28 (p<0.01 on Day 3 and Day 28, respectively).

## > Pruxelutamide improved COVID-19 related symptoms

With respect to improvements in symptoms, pruxelutamide group showed better improvements in certain COVID-19 related symptoms such as fever, shortness of breath, cough until at least Day 28 as compared to the controlled group.

# **Safety:**

# Well tolerated and manageable in all subjects

- Incidents of TEAE were 7.9% and 9.6% respectively in controlled group and pruxelutamide group.
- The majority of TEAE was mild, the most common AE was dizziness(1.1% in both controlled and pruxelutamide groups), the incidence of any of the remaining AE events was less than 1%.
- No SAE in the study.



# The China, Brazil & Intl Phase III Study for Outpatients

# GT0918-MR-3001 (*NCT04869228*)

Sample Size: 724

# Eligibility Criteria:

- Confirmed positive SARS-CoV-2 rt-PCR test ≤3 days prior to randomization
- Not hospitalized for acute respiratory symptoms(NIAID 8-point score in 7 and 8)
- Age ≥45 years old
- Male and female
- High risk

## **Experimental:**

**Pruxelutamide** 300 mg, oral, QD, for continuous 7-14 days plus physician's treatment choice

#### Control:

 $R^2$ 

1:1

**Placebo** 300 mg, oral, QD, for continuous 7-14 days plus physician's treatment choice

## **Primary Endpoints:**

 Percentage of (1) receiving oxygen therapy or hospitalization, or (2) becoming severe from mild by Day 28

## **Secondary Endpoints:**

- Qualitative virology
- NIAID 8-point scoring scale
- Change of symptoms change, etc.

## **Countries and regions:**

China, South America (including Brazil), SEA (including Philippines), EU, etc.

IND was approved by ANVISA on Jun 11, 2021 in Brazil

**>** 

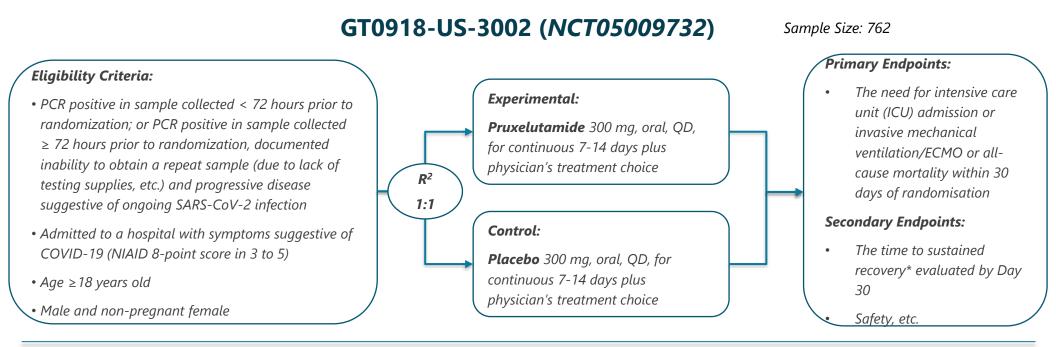
IND approved in Philippines, Malaysia, etc. since Jun

e

Commenced patients enrolment in Brazil on Aug 4, 2021 IND was approved by NMPA on Sep 1, 2021 in China FPI in China in Shenzhen 3<sup>rd</sup> People's Hospital on Feb 10, 2022



# The US, China & Intl Phase III Study for Inpatients



## **Countries and regions:**

The United States, China, South America, EU, India, etc.

FDA greenlighted to conduct on May 17, 2021



IND was approved by NMPA on Sep1, 2021 in China



IND was approved by ANVISA on Sep 26, 2021 in Brazil



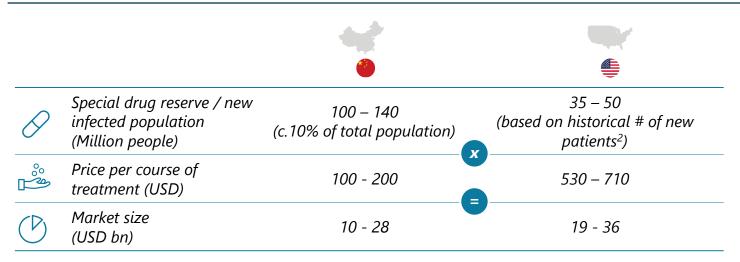
Commenced patients enrolment on Oct 1, 2021 in US

\*Day of sustained recovery is defined as the first day on which the subject satisfies one of the following three categories from the NIAID ordinal scale and maintains a score of 6, 7 or 8 through Day 30.(6)Hospitalized, not requiring supplemental oxygen - no longer requires ongoing medical care; (7)Not hospitalized, limitation on activities and/or requiring home oxygen; (8)Not hospitalized, no limitations on activities.



# Pruxelutamide (GT0918) for COVID-19: Potentially **China's first small molecule** COVID-19 drug

## Estimated market size of small molecule COVID-19 drugs in China and US1



 The COVID-19 drug market is estimated to be valued at USD 10-28bn for China market based on government special drug reserve and USD 19-36bn for US market based on # of new infected patients

## Clinical progress of Pruxelutamide for COVID-19

Ongoing	Released data	Ongoing	
•			
2021.10.1	2022.4.6	2022 H2	
<ul> <li>The US, China &amp; Intl Phase III         Study for Inpatients         (NCT05009732): commenced         patients enrolment on Oct 1 2021         in US</li> </ul>	The US & Intl Phase III Study for Outpatients Top-line Data (NCT04870606): announced top-line results on April 6, 2022	<ul> <li>The China, Brazil &amp; Intl Phase III Study for Outpatients (NCT04869228): expected to release interim analysis data in H2 2022</li> </ul>	



Notes: 1. Injection small molecule drugs are not taken into account



<sup>2.</sup> The number of 2021 new COVID patients in the US is 35 million, and LTM number of new COVID patients is c.50 million

# **GMP Facilities and Commercialization**

# MANUFACTURING AND R&D BASE

- c. 20,000 m2 factory in Suzhou
- **Put into operation** at the end of Aug 2020
- Received production permit in 23 Nov 2020, and will obtain China GMP certification, as well as FDA GMP and EU GMP subsequently
- To meet the commercialization needs of pruxelutamide (expect to cover 50 million people in 2022), and clinical needs of pyrilutamide





# STRATEGIC COOPERATION AGREEMENT



## etana



### **PT Etana Biotechnologies**

In Aug 2021, signed the licensing agreement with Etana on the commercialization of pruxelutamide for the treatment of COVID-19 in Indonesia. Kintor will receive upfront and milestone payments and economic benefit relating to the sales



# **Shanghai Pharma**

In Dec 2021, signed a strategic cooperation framework agreement with Shanghai Pharma in the new product commercialization



## **Fosun Pharma Development**

In Jul 2021, signed licensing agreement with Fosun on the commercialisation of pruxelutamide for COVID-19 in India and 28 African countries. Kintor will receive upfront and milestone payments up to RMB560 million and royalty not less than 50% of total operating profit



## **JD Pharmacy**

In Jun 2020, signed a strategic cooperation framework agreement with JD Pharmacy in the marketing and sales of pyrilutamide



### **Visum Pharma**

In Apr 2021, signed the strategic cooperation agreement with Visum which has strength in production and was certified by US FDA, on expanding the supply capacity of pruxelutamide



## **Sinopharm**

In Mar 2020, signed the strategic cooperation agreement with Sinopharm in the market development of pyrilutamide

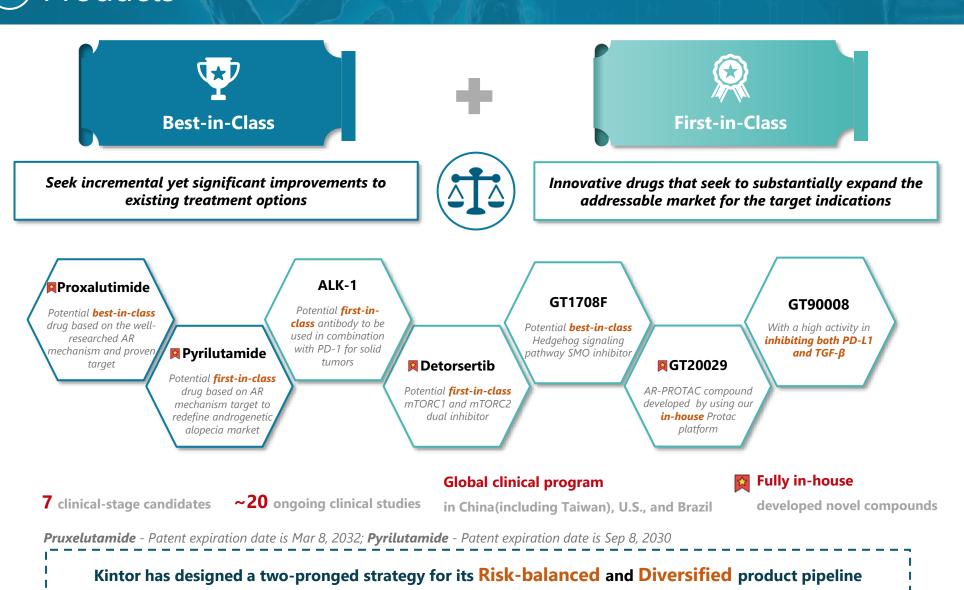




Section 2

# Introduction of Candidates in Clinical Stage

# Risk-balanced Pipeline of Potential First- and Best-In-Class Products





Source: Company Prospectus, Frost & Sullivan analysis

# Summary: MOA of Pruxelutamide for COVID-19

# **Mechanism 1:**

# Mechanism of Inhibiting SARS-Cov-2 Entry into the Host Cells

- Pruxelutamide inhibited SARS-CoV-2 infection for **WA1 original strain, Alpha and Delta variants** in LNCaP by down-regulating the expression of TMPRSS2 and ACE2.
- Pruxelutamide inhibited SARS-CoV-2 infection for **SARS-CoV-2 Gamma variant** in humans. b)

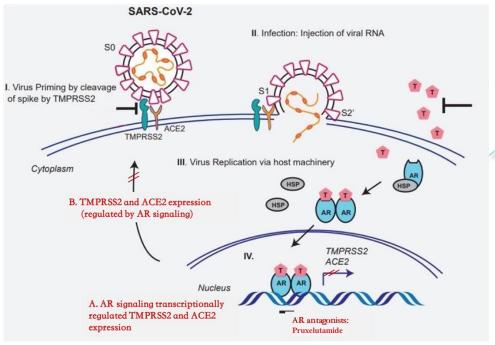
# **Mechanism 2:**

# Evidence of Pruxelutamide's Impact on Immunity and Inflammation Regulation for COVID-19

- Pruxelutamide increased the expression and the activity of Nrf2, with potential to counteract symptoms induced by the cytokine storm in COVID-19.
- Pruxelutamide regulated **inflammation related pathway** in RAW264.7 Cells.
- Pruxelutamide down-regulated  $I \kappa B \alpha$  phospharylation and attenuated  $NF \kappa B$  signaling.
- Pruxelutamide down-regulated iNOS expression in macrophage cells.
- Pruxelutamide dose-dependently inhibited LPS-induced **TNF-\alpha** and **IL-6** expression in vitro.
- Pruxelutamide showed promising signaling in preventing cytokine storm-induced cell death in vitro and in vivo.
- Pruxelutamide inhibited acute immune response in Poly I:C-induced acute lung Injury animal model (in vivo), and improved Lung Injury in Hospitalized COVID-19 Patients.



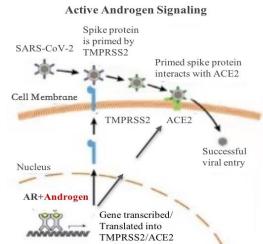
# MoA of Pruxelutamide (1): AR Signaling Regulates ACE2/TMPRSS2 Mediated SARS-CoV-2 Infection

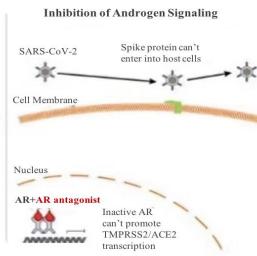


# SARS-CoV-2 entry into host cells requires two host cell surface proteins: ACE2 and TMPRSS2.

- The spike protein need to be primed by TMPRSS2 before it could interact with ACE2 to get the RNA of the virus entered into host cells.
- The expression of TMPRSS2 and ACE2 are positively regulated by the AR signaling.
- Targeting AR-ACE2/TMPRSS2 signal axis could originally inhibit the entry of the virus into host cells by transcriptionally downregulating the expression of TMPRSS2 and ACE2, which has gradually been receiving growing attention as potential therapies for COVID-19.

AR antagonists (like pruxelutamide) inhibit SARS-CoV-2 entry into host cells by inhibiting the function of AR and downregulating the expression of ACE2 and TMPRSS2







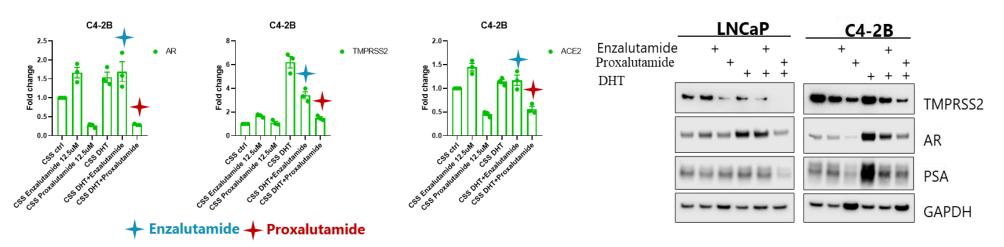
Source: Qiao Y., et al, Proceedings of the National Academy of Sciences. 2021; Leach D. A., et al, Research Squae. r2021. .

# MoA of Pruxelutamide (1): More Effectively Downregulates 2 ACE2 and TMPRSS2 Expression than Enzalutamide

Pruxelutamide more effectively downregulates TMPRSS2 and ACE2 genes and proteins expression than enzalutalumide, and is effective in both androgen dependent and independent LNCaP cell lines

# mRNA Expression of AR, TMPRSS2, ACE2

# AR and TMPRSS2 Protein Expression



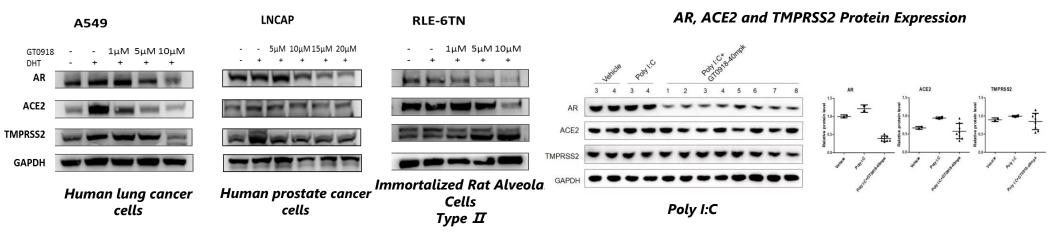
Note: C4-2B is an androgen-independent variant of the LNCap cell line; LNCap is an androgen-dependent cell line; CSS = Charcoal Stripped Serum; DHT = Dihydrotestosterone



# MoA of Pruxelutamide (1): Down Regulation of ACE2 and TMPRSS2 Expression in vitro and in vivo

# Pruxelutamide Down-regulated ACE2 and TMPRSS2 Protein Expression

# Pruxelutamide Down-regulated ACE2 and TMPRSS2 Expression in vivo



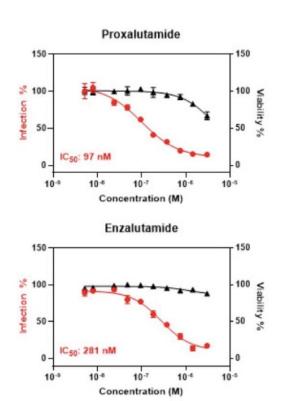
Pruxelutamide inhibited ACE2 and TMPRSS2 protein expression in human lung and prostate cancer derived cells and normal lung epithelial cells, suggesting pruxelutamide can block SARS-CoV-2 cellular entry into host cells.

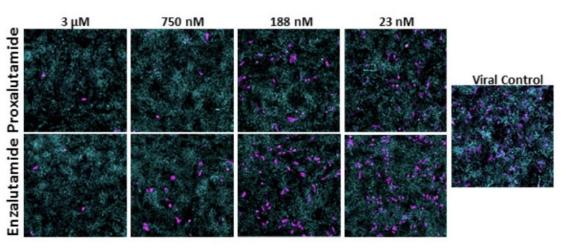
ACE2 and TMPRSS2 were down-regulated in Balb/c mice with treatment with Pruxelutamide, confirming AR-signaling regulates ACE2 and TMPRSS2 in vivo.



# 2

# MoA of Pruxelutamide (1): With Lower Concentration in Inhibiting SARS-CoV-2 Infection





The  $IC_{50}$  is the concentration of drug required for 50% inhibition.

### In-vitro result

Pruxelutamide  $IC_{50} = 97 \text{ nM}$ vs. Enzalutamide  $IC_{50} = 281 \text{ nM}$ 

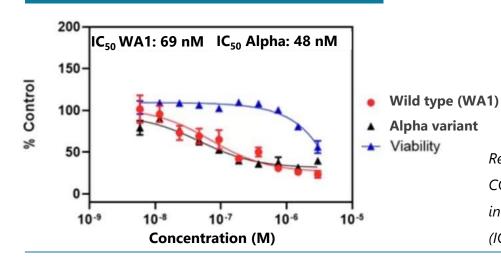
## **Conclusion**

Pruxelutamide is 3-fold more potent than enzalutamide in inhibiting SARS-CoV-2 infection in LNCaP Cells.



# MoA of Pruxelutamide (1): Inhibits SARS-CoV-2 Alpha and Delta Variants

## Pruxelutamide inhibits SARS-CoV-2 alpha variant



SARS-COV-2 WA1

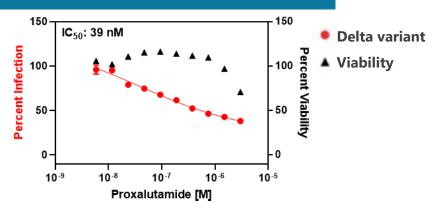
Pruxelutamide  $IC_{50} = 69 \text{ nM}$ 

SARS-CoV-2 alpha variant

Pruxelutamide  $IC_{50} = 48 \text{ nM}$ 

Result: Pruxelutamide effectively inhibited SARS-COV-2 WA/01-2020 and SARS-COV-2 B.1.1.7 variant(alpha variant) strains infection in AR positive LNCaP cells in a dose-dependent manner, with concentration that inhibits response by 50% ( $IC_{50}$ ) values of 69 and 48 nM, respectively

### Pruxelutamide inhibits SARS-CoV-2 delta variant



SARS-CoV-2 delta variant

Pruxelutamide  $IC_{50} = 39 \text{ nM}$ 

Result: Pruxelutamide effectively inhibited delta variant strains infection in AR positive LNCaP cells, with concentration that inhibits response by 50% (IC $_{50}$ ) values of 39 nM



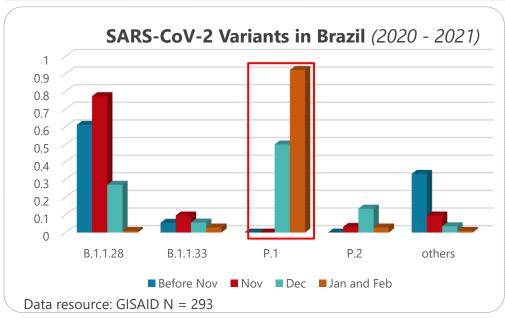
Source: Michigan Center for Translational Pathology, University of Michigan; "Pruxelutamide" is previously known as "Proxalutamide"

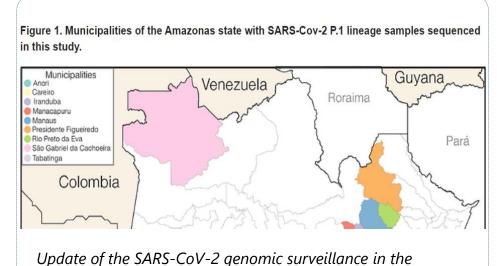
# MoA of Pruxelutamide (1): Inhibits SARS-CoV-2 Variant

- So far, the in vitro studies in the P3 laboratory have demonstrated that pruxelutamide can effectively inhibit infections caused by the Alpha and Delta variants.
- The outcome of genome sequencing on COVID-19 inpatients in Brazil has shown that pruxelutamide has effectively treated inpatients infected by Gamma variant.
- The SARS-CoV-2 Gamma (P.1) variant came to dominated in Brazil since 12/2020 and has spread to many countries out of Brazil.

SARS-CoV-2 Variants in Brazil (No. (%))					
Time Period	P.1	P.2	B.1.1.28	B.1.1.33	
2021 Jan & Feb	96 (92%)	3 (3%)	1 (1%)	3 (3%)	
2020 Dec	70 (50%)	19 (14%)	38 (27%)	8(6%)	
2020 Nov	0	1 (3%)	24 (77%)	3(10%)	
Before 2020 Nov	0	0	11 (61%)	1(6%)	

SARS-CoV-2 Variants in Amazonas (No. (%))				
Time Period	P.1	P.2	B.1.1.28	others
2021 Jan	32 (91%)	2 (6%)	0	1 (3%)
2020 Dec	28 (51%)	6 (11%)	17 (31%)	4 (7%)
2020 Nov	0	1 (4%)	19 (79%)	4 (17%)

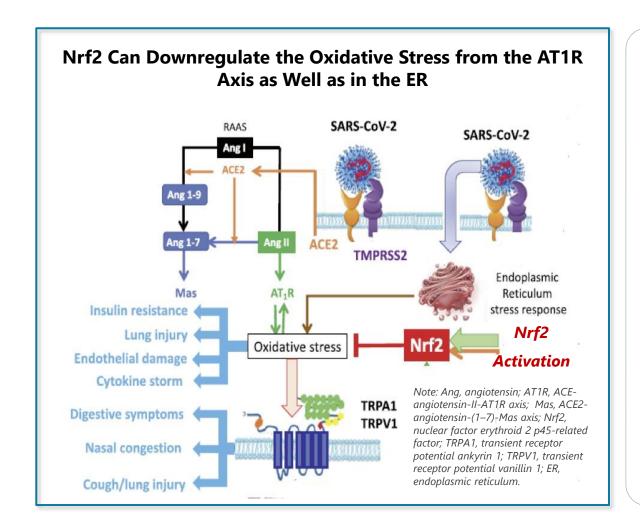




amazonas state, Brazil, https://virological.org.



# MoA of Pruxelutamide (2): Upregulation of Nrf2 Signaling Inhibits the Overproduction of Proinflammatory Cytokines

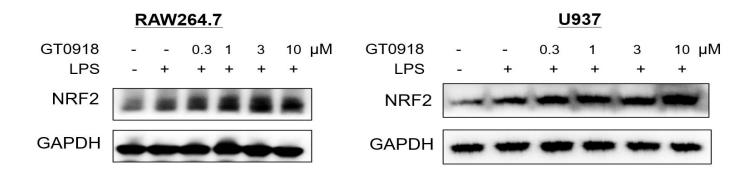


- A common denominator in all conditions associated with COVID-19 appears to be the impaired redox homeostasis, responsible for the accumulation of reactive oxygen species (ROS).
- SARS-CoV-2 binds to ACE2, and ACE2 downregulation enhances the AT1R axis leading to oxidative stress generation.
- In particular, the upregulation of Nrf2 signaling inhibits the overproduction of IL-6, proinflammatory cytokines(TNF-α), and chemokines.
- It also limits the activation of nuclear factor-kappa b (NFkB) which is also involved in oxidative stress.

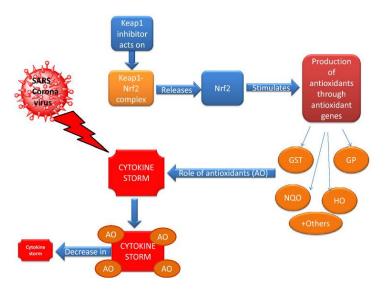


# MoA of Pruxelutamide (2): Increased the Protein Expression of Nrf2 in vitro

# Pruxelutamide upregulated Nrf2 protein expression in RAW264.7 and U937 cells



Nrf2 Activation Helps to Counteract Symptoms
Induced by the Cytokine Storm in COVID-19



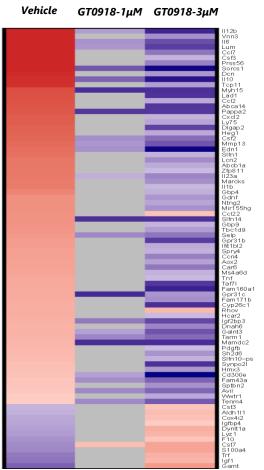


Source: Singh E, et al. Management of COVID-19-induced cytokine storm by Keap1-Nrf2 system: a review. Inflammopharmacology. 2021. <a href="https://doi.org/10.1007/s10787-021-00860-5">https://doi.org/10.1007/s10787-021-00860-5</a>; Prof. Qin Jun from Beijing Proteome Research Center

# 2

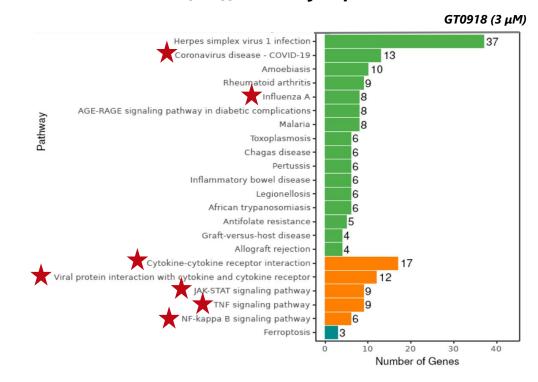
# MoA of Pruxelutamide (2): Regulated Inflammation Related Pathway in RAW264.7 Cells

### LPS-induced RAW264.7 Cell



logFC

# **Functional Enrichment of Differentially Expressed Genes**



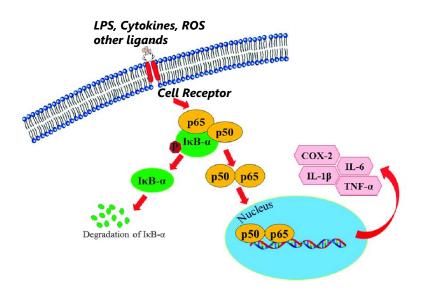
- Among the differentially expressed genes, **68** genes were down-regulated in a dose-dependent manner and **12** genes were up-regulated with the treatment of Pruxelutamide.
- Most of these genes were enriched in **antiviral** and **immune regulation-related** pathways.





# MoA of Pruxelutamide (2): Down-Regulated IκBα Phospharylation and Attenuated NF-κB Signaling

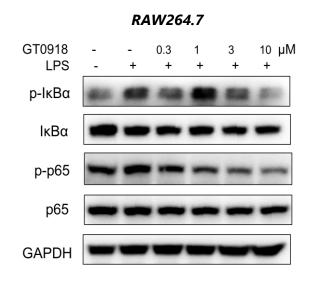
# NF-KB Signaling Pathway Regulates the Expression of Various Pro-inflammatory Genes



# • NF-κB is a heterodimer consisting of p65 and a p52 or p50. Inactivated NF-κB binds with IκB-α.

Phosphorylation of IκB-α results in the dissociation of NF-κB from IκB-α, allowing the translocation of heterodimer into the nucleus and binding to the promoters of pro-inflammatory genes, such as IL-1β, IL-6, TNF-α, and cyclooxygenase (COX)-2.

# Pruxelutamide Down-Regulated the Phospharylation of IκBα & p65 in NFκB Pathway

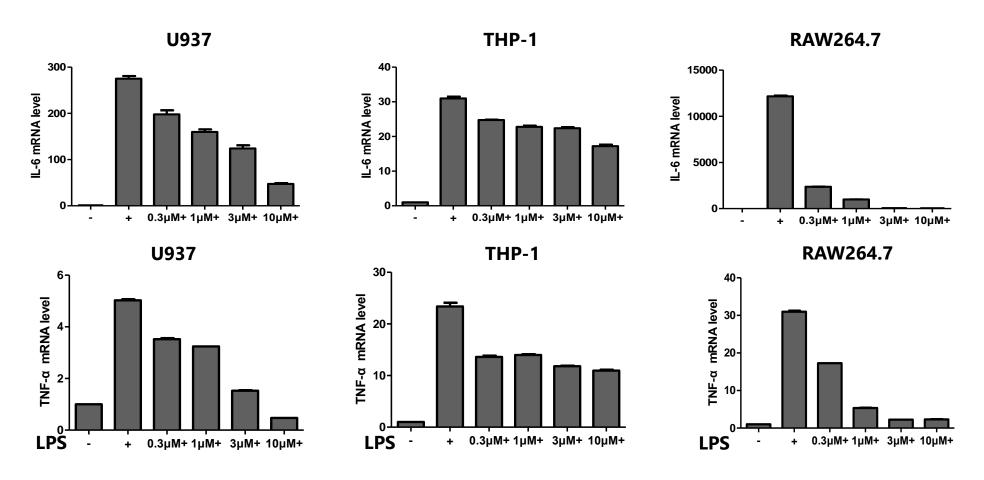


• Pruxelutamide down-regulated the activation of p65 by decreasing phosphorylation of IκBα, and inhibited the activation of NFκB pathway in a dose-dependent manner, suggesting the possible mechanism of Pruxelutamide on immune regulation.



# 2

# MoA of Pruxelutamide (2): Dose-Dependently Inhibited LPS-induced TNF- $\alpha$ and IL-6 Expression at mRNA Level in vitro



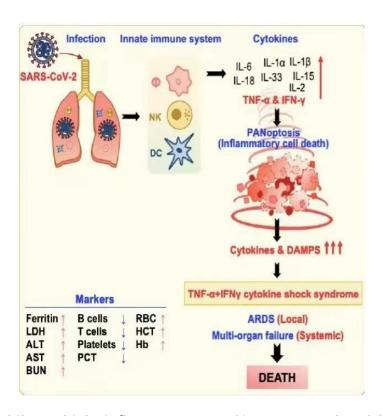
• Pruxelutamide inhibited LPS-induced TNF-α and IL-6 expressions in RAW264.7, THP-1 as well as AR-negative U937 cells, in a dose dependent manner. (18 hours incubation)

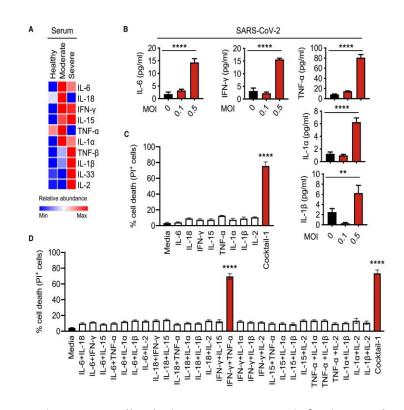




# MoA of Pruxelutamide (2): Down-Regulated the Expression of STATE1 and STATE3 on Downstream of TNF- $\alpha$ and INF- $\gamma$ -Induced Inflammatory Cell Death Pathway

# TNF-α and IFN-γ Synergize to Drive the Cytokine Storm and Cell Death Associated with COVID-19





While multiple inflammatory cytokines are produced by innate immune cells during SARS-CoV-2 infection, only the combination of TNF-a and IFN- $\gamma$  induced inflammatory cell death characterized by inflammatory cell death, PANoptosis.

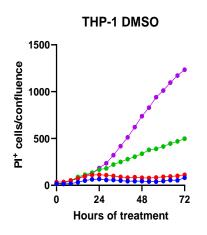


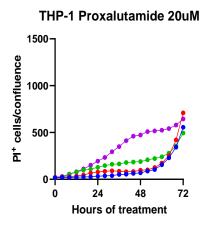
**Source:** Karki et al. Synergism of TNF-a and IFN-g Triggers Inflammatory Cell Death, Tissue Damage, and Mortality in SARS-CoV-2 Infection and Cytokine Shock Syndromes. **Cell**, 2021 (184), 149–168.

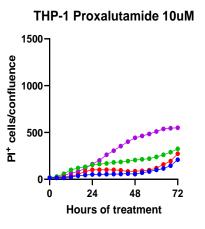
# 2

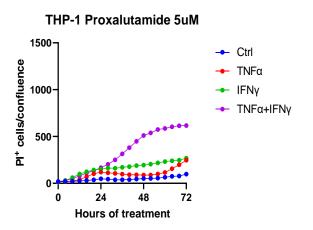
# MoA of Pruxelutamide (2) : Inhibited TNF- $\alpha$ and IFN- $\gamma$ -induced Inflammatory THP-1 Cell Death

THP-1 human macrophages were stimulated with TNF- $\alpha$  and IFN- $\gamma$  to induce inflammatory cell death and then were treated with pruxelutamide (5 μM, 10 μM and 20 μM) for 72 hr.







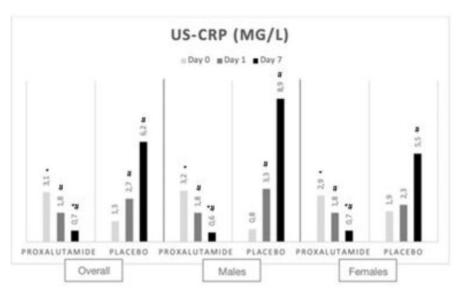


Pruxelutamide protected TNF- $\alpha$  + IFN- $\gamma$  induced cell death in dose dependent manner.

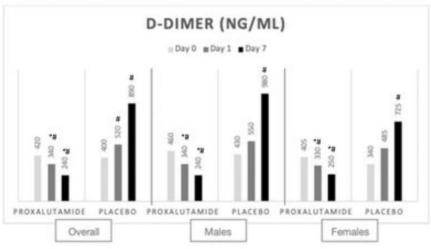


# 2

# MoA of Pruxelutamide (2): Significantly Reduces Inflammatory and Thrombotic Markers



1. Ultrasensitive C-reactive protein is a protein the liver produces in the presence of infection or inflammatory disease



2. D-dimer levels are used as a predictive biomarker for the blood disorder, disseminated intravascular coagulation and in the coagulation disorders associated with COVID-19 infection

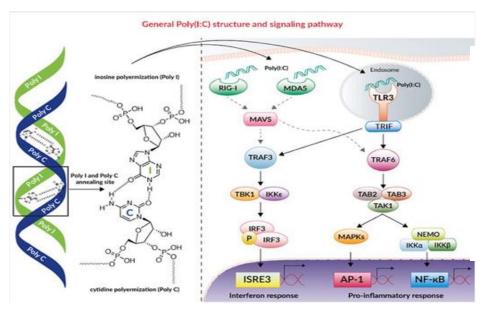


\* = p < 0.05 versus placebo; # = p < 0.05 versus day 0



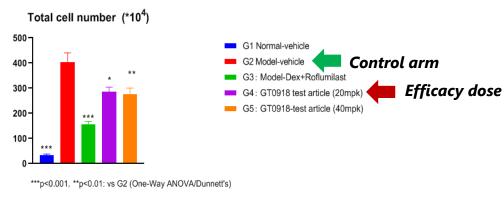
# MoA of Pruxelutamide (2): Inhibited Acute Immune Response in Poly I:C-induced Acute Lung Injury Animal Model

# General Poly I:C Structure and Signaling Pathway



- Polyinosinic: polycytidylic acid (usually abbreviated as poly I:C) is a doublestranded RNA which stimulate the Toll-like receptor 3 (TLR3).
- Poly I:C induced acute lung injury model is a common model for scientific research on the immune system
- This model may simulate Covid-19 patient pathophysiological processes, like the secretion of IL-6 and TNF- $\alpha$  increased in bronchoalveolar lavage fluid (BALF)

# Effect of Pruxelutamide in Poly I:C-induced Viral Infection Mouse Model



**Note:** Dex = Dexamethasone; Roflumilast = PDE4 inhibitor. These two drugs are only for the model validation

☐ GT0918 at 20 mpk/BID (human equivalent dose= 100mg/BID)

level is an efficacy dose to reduced infiltrated white blood cell

counts in lungs in Poly I:C induced viral infection mouse model



Source: Gu, Tingxuan, etc. "Molecular mechanism of SARS-CoV-2 components caused ARDS in murine model": 2020.06.07.119032. doi:10.1101/2020.06.07.119032v4.

# HED Safety Profile from SD Rats Model

Repeat-Dose Toxicity in SD Rats	Dose (mg/kg)	NOAEL (no observed adverse effect level)	HED (Human equivalent dose)
4-week	20, <u>60</u> ,120	60mg/kg	60mg/kg ÷ (36.88/6.6) ×60kg= <b>644mg</b>
13-weeks	20,45, <u>90</u>	90mg/kg	90mg/kg ÷ (36.88/6.6) ×60kg= <b>966mg</b>
26-weeks	20, <u>45</u> ,90	45mg/kg	45mg/kg ÷ (36.88/6.6) ×60kg= <b>483mg</b>

 $HED=NOAEL(mg/kg) \div [km_{human}/km_{animal}]*Human Weight$ 

km <sub>human</sub> =36.88, km <sub>animal</sub> =6.6, Human Weight=60kg

$$\begin{aligned} \textit{Note:} \quad & \text{Km=Dose(mg/m^2) $\div$Dose(mg/kg) $\leftarrow$} \\ &= [10 \times \text{Dose}_{(\text{mg/kg})} \times \text{W} \div (10^{(0.698 \times \log \frac{W}{10} + 0.8762\,)})] \div \text{Dose}_{(\text{mg/kg})} \leftarrow\\ &= (10 \times \text{W}) \div 10^{(0.698 \times \log \frac{W}{10} + 0.8762)} & \leftarrow \end{aligned}$$

The weight in three repeat dose toxicity studies in rats was about 250g.

The human equivalent NOAELs for a 60kg man are 644mg for 4 weeks, 966mg for 13 weeks, and 483mg for 26 weeks, separately observed in the rat model, which means **200mg/300mg for 2 weeks has a good safety profile in COVID-19 clinical trials**.



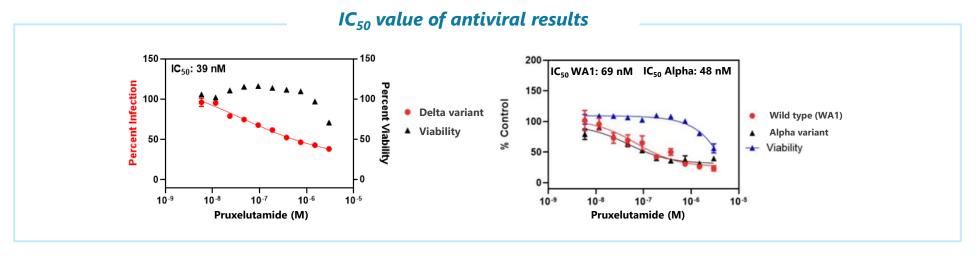
# Sufficient Clinical Exposure of Pruxelutamide to Be Effective In-

	× /•
2	Vivo
( <sup>-</sup> /	VIV

	Α	В	С	
Single dose of 200mg	Cmax (ng/mL)	Cmax (μM)	Free Drug (nM)	
Pre-meal	6580	12.7	152.6	686.6
Post-meal	12200	23.6	282.9	1273.0

Note: PPB(Plasma protein binding): 94.6%~98.8%; MW(molecular weight)::517.5

A/MW=B, B\*(1-PPB)=C



Following a single oral dose of 200mg, GT0918 geometric mean Cmax was 12.7  $\mu$ M and 23.6  $\mu$ M following pre-meal and post-meal conditions respectively. Given the consideration of human PPB is 94.6%~98.8%, the free drug is 152.6~686.6 nM and 282.9~1273.0 nM, which is **far higher than IC**<sub>50</sub> **value of antiviral results**(69 nM for wild type/39nM for delta variant/48nM for alpha variant), **thus sufficient to be effective in vivo.** 



# Pruxelutamide (GT0918): Ongoing mCRPC Clinical Trials

## **Phase III Clinical Trials in China (Monotherapy)**

Conducting data analysis

CTR20180849

### Design

To evaluate the impact on the rPFS and overall survival time, the safety, as well as the relationship between the discovery of biomarkers and the efficacy of pruxelutamide in mCRPC patients who have failed Abiraterone and Docetaxel treatments

#### **Patient Enrolment**

Multi-centre, randomised, double blind clinical trials

### 330 patients

from 38 sites nationwide

### **Experimental**

**220** patients to receive a fixed 200mg dose pruxelutamide per day

#### **Control**

**110** patients to receive a placebo each day

Each treatment cycle lasts 28 days

## **Co-primary endpoints**

Radiographic progression-free survival (rPFS), overall survival(OS)

### Phase III Clinical Trials in China (Combo-therapy with Abi)

Enrolled total 718 patients on Feb 24, 2022

CTR20182095

### Design

To evaluate the efficacy and safety of pruxelutamide's combination therapy with Abiraterone in comparison with Abiraterone in monotherapy as a **first-line treatment for mCRPC** 

#### **Patient Enrolment**

1st **Phase:** Multi-centre, open, one-arm design to assess safety and tolerability

## 6 patients

recruited via parallel enrolment

### Test Group

Each patient was treated with 400 mg of pruxelutamide in combo with 1000 mg of Abiraterone

<u>Completed. No treatment-related DLT found.</u>

**2<sup>nd</sup> Phase:** Evaluation of rPFS, pharmacodynamic indicators, safety and others

## 718 patients

recruited via parallel enrolment

Combo Abiraterone therapy monotherapy

## **Primary endpoints**

Radiographic progression-free survival (rPFS)





# Pruxelutamide (GT0918): Ongoing mCRPC Clinical Trials

## Phase II Clinical Trials in US (Monotherapy) NCT03899467

Will conduct data analysis in Q2 2022

### Design

To evaluate the safety and tolerability of pruxelutamide in patients with mCRPC who have **failed Abiraterone or Enzalutamide treatment** 

#### **Patient Enrolment**

Multi-centre, open-label, randomised study

### 60 patients

In two treatment arms of 30 patients across 10 study centers

## 400 mg

30 patients (including 15 of whom have failed enzalutamide and 15 of whom have failed Abiraterone)

## 500 mg

30 patients (including 15 of whom have failed enzalutamide and 15 of whom have failed Abiraterone)

### **Endpoints**

Primary endpoints: 1) recommended Phase 2 dose; 2) Number of Patients With Toxicity of pruxelutamide

<u>Secondary endpoints</u>: 1) >50% PSA suppression; 2) percentage of radiographic disease progression; 3) radiographic and bone progression time; 4) the time to PSA progression; 5) exploratory biomarkers: cell free circulating tumor DNA (ct-DNA)/RNA (ct-RNA); 6) exploratory biomarkers: Circulating tumor cells (CTC)





# Pruxelutamide: Metastatic Breast Cancer



# Phase Ic Clinical Trials in China (CTR20191063)

To evaluate the safety, pharmacokinetic characteristics and initial efficacy of Pruxelutamide in combination with Exemestane, Letrozole and Fulvestrant in patients with HR+ and AR+ metastatic breast cancer

Stage 1: Introduction Period to collect pharmacokinetics data of individual drugs

#### Letrozole

14 days (6 patients)

#### **Exemestane**

14 days (6 patients)

#### **Fulvestrant**

28 days (6 patients)

Stage 2: Combination Therapy Period wherein Pruxelutamide and the combo therapy drug will be administered with two 4 week (28 days) treatment cycles

### 1st Cycle

Subjects will receive a DLT assessment during the 1st cycle of combination therapy

## 2<sup>nd</sup> Cycle

Subjects will undergo a tumour imaging evaluation at the end of the  $2^{nd}$  cycle of treatment

**Stage 3: Extended Treatment Period** after the completion of 2 treatment cycles



#### **Extended Treatment**

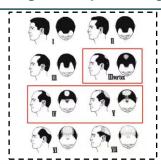
If a subject's disease is clinically relieved or stable and well tolerated and if the subject is willing to continue taking the test drug, the investigator may continue to give the patient extended treatment until there is disease progression





# Pyrilutamide: Utilizing our Proprietary AR Capabilities to Address Androgenic Alopecia

#### Androgenic alopecia - A growing concern globally



- Common form of scalp hair loss affecting **both men and women**
- Rapidly growing concerns among all age group due to lifestyles and stress

Stage IIIvertex-V in Norwood–Hamilton scale

#### Prevalence<sup>1</sup>

#### Market potential<sup>2</sup>







Market Size of Drugs Approved for Androgenetic Alopecia

CNY5.04bn in 2028







Market Size of Drugs Approved for Androgenetic Alopecia

**US\$1.4bn** in 2028

#### **Underpenetrated market lack of novel treatment**

## Androgenetic alopecia is a common form of scalp hair loss that affects both men and women

#### Finasteride



Oral: Approved for androgenetic alopecia by the US FDA in 1997

Spray: Approved in Luxembourg and Italy in 2020; approved in Portugal and Germany in 2021

#### Minoxidil

Approved for androgenetic alopecia in 1988 and as an OTC drug in 1996 by the US FDA

Only two products\* available in the market for androgenic alopecia,

and no novel treatment approved in the last 22 years

\*Dutasteride was approved for the treatment of AGA by South Korea and Japan in 2009 and 2015 separately, but was approved by FDA only for the treatment of benign prostatic hyperplasia (BPH) in 2001

#### Significant limitations and side effects in current treatments

#### **Finasteride**

- Severe sexual adverse effects
- Orally taken drug
- Only approved and found effective for use in men

#### Minoxidil

- Fragmented market after patent expiry in 1998
- No clear MoA
- **Strong demand** by people with AGA for the medical treatment with **proven efficacy** and **safety**
- **Treatment rate** for hair loss remains **high** and is expected to **improve** consistently each year
- OTC options and hair transplant are rapidly growing due to the lack of effective and safe medical options

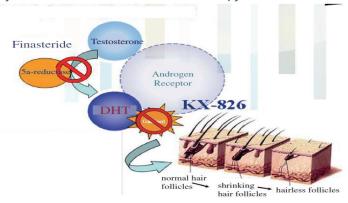


Source: Company Prospectus, Frost & Sullivan analysis, Note: 1. Data in 2019 2. Refer to drugs (excluding consumer goods) 3. USD/CNY = 6.67

## Pyrilutamide: Androgenetic Alopecia

#### **Mechanism of Action**

The combination process of **DHT and receptors affects the hair follicle cells**, which leads to obstruction of hair follicles and results in the shrinkage of hair follicles due to their ability absorb nutrients. It leads to excessive hair loss, and eventually to baldness without immediate therapy.



KX-826 is being developed for topical application to locally block the androgen mediated signalling **by competing androgen to bind to AR** in the targeted tissues instead of reducing androgen levels systemically

#### **Results from Previous Clinical Trials**

#### Phase I/Ib clinical trials in China and US

- ✓ **Safety:** There were **no** ≥ **grade 3 SAE**. All AEs related to the drug were "contact dermatitis" **and all were mild**, which recover/heal in a short time. The contact dermatitis may be caused by excipients.
- ✓ PK: The blood concentration is extremely low.

#### **Clinical Trials**

#### **Ongoing**



Phase III Clinical Trials For AGA Male Adults In China (randomized, double-blind, placebo-controlled, multi-regional)

- Sample size = 416
- Primary endpoint: the change from baseline in non-vellus target area hair counts (TAHC) at week 24
- Commenced first patient enrollment on Dec 31, 2021



**Phase II Clinical Trials For AGA Female Adults In China (**randomized, double-blind, placebo-controlled, multi-regional)

- Sample size = 160
- Primary endpoint: the change from baseline in non-vellus target area hair counts (TAHC) at week 24



**Phase II Clinical Trials For AGA Male Adults In US (**randomized, doubleblind, placebo-controlled**)** 

- Sample size = 120
- Primary endpoint: the change from baseline in non-vellus target area hair counts (TAHC) at week 24

#### **Completed**



**Phase II Clinical Trials For AGA Male Adults In China**(randomized, double-blind, placebo-controlled, multi-regional)

- Sample size = 120, randomized at the ratio 1:1:1:1 to 4 arms: (2.5mg) 0.25% Pyrilutamide BID, (5mg) 0.5% Pyrilutamide QD, (5mg) 0.5% Pyrilutamide BID, and Placebo.
- Primary endpoint: the change from baseline in non-vellus target area hair counts (TAHC) at week 24
- Results: Announced on Sep 8, 2021 that KX-826's phase II trial for male AGA adults met primary endpoints in China. The majority of AEs were mild and no SAE occurred. 5mg (0.5%) will be used in phase III trial in China
- Expected to release detailed data in June 2022



Source: Company Prospectus, CDE



# Pyrilutamide: Utilizing our Proprietary AR Capabilities to Address Acne Vulgaris

#### **Robust Clinical Profile Target to Redefine the Market**

## Acne vulgaris is a chronic inflammatory dermatosis notable for open or closed comedones and inflammatory lesions

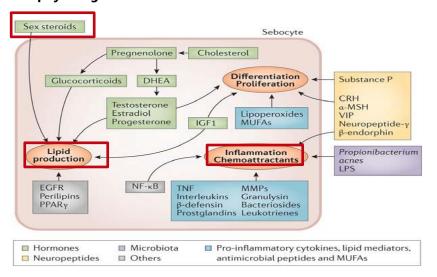
Hormonal agents, topical therapies, systemic antibiotics and isotretinoin are the prescribed treatment options



150+ million

Prevalence of acne globally aging 10 to 25 in 2018

#### **Pathophysiological Processes**



- The pathogenesis of acne involves several processes, including sebum production and sebocyte differentiation, proliferation, and inflammation.
- These processes are regulated by circulating sex hormone levels as well as locally synthesized hormones, neuropeptides, the microbiota, and pro-inflammatory cytokines, lipid mediators, antimicrobial peptides, and monounsaturated fatty acids (MUFAs).

#### **Ongoing Clinical trials**



Received IND approval for acne vulgaris in China, and completed first patient enrolment of phase II trial in Jan 2022



Expect to complete phase I/II trial and commence phase III trial in 2022

#### Phase I/II clinical trials in China CTR20210427

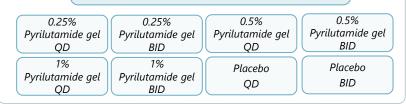
#### Design

Evaluate the safety, tolerability, pharmacokinetics, and efficacy of pyrilutamide in subjects with mild to moderate acne vulgaris

#### **Subjects Enrolment**

Randomized, double-blind, placebo-controlled clinical study

#### 224 subjects



#### **Primary endpoints**

Phase I: Tolerability and safety (contact dermatitis, AEs, etc.)

Phase II: Efficacy and safety (IGA Scale, facial sebum level, AEs, etc.)

\*IGA: Investigator Global Assessment



Source: Company Prospectus, Frost & Sullivan analysis, CDE

## 5

## ALK-1 (GT90001): Potential First-in-class Fully Human Mab

- ◆ Conducting phase Ib/II clinical trial in combination with Nivolumab for the 2<sup>nd</sup>-line treatment of HCC in Taiwan, China
- ◆ On Oct 9, 2021, NMPA approved the clinical trial in combination with Nivolumab for the treatment of HCC
- ◆ On May 2, 2022, the phase II clinical trial in combination with Nivolumab for the 2<sup>nd</sup>-line treatment of HCC commenced first patient enrollment

#### Phase II MRCT in the U.S. (NCT05178043)

This is an open label, multi-regional study designed to evaluate the efficacy and safety of GT90001 in combination with Nivolumab in patients with advanced HCC who were intolerant of, or had progressed after first-line treatment with Immune Checkpoint Inhibitors (ICI) such as Atezolizumab and/or Bevacizumab, or ICI plus Tyrosine Kinase Inhibitor (TKI).

#### **Subjects Enrollment**

105 subjects

The proposed dose is GT90001 7 mg/kg in combination with Nivolumab 240 mg, infusion every two weeks

#### **Primary endpoints**

The overall response rate (ORR) as evaluated by an independent review committee (IRC) according to Response Evaluation Criteria in Solid Tumors (RECIST) v1.1.



## 5

## ALK-1 (GT90001): Phase II in Taiwan

**Study Design in TW:** a phase I/II, open-label, single arm, dose de-escalation and expansion trial of GT90001 in combination with Nivolumab (NCT03893695)

#### **Study Population:**

- HCC with at least one measurable lesion.
- BCLC C or B (refractory or not amenable to locoregional therapy).
- Have documented disease progression or intolerance after first-line systemic treatment with Sorafenib or Lenvatinib
- Child-Pugh score ≤ 6.
- ECOG performance status: 0-1.

#### Stage One: Safety evaluation GT90001 SMC 7.0 mg/kg, iv, Q2W **SMC** GT90001 Nivolumab 4.5 mg/kg, iv, Q2W 3.0 mg/kg, iv, Q2W GT90001 Nivolumab Cohort A, N = 6, no DLT 3.0 mg/kg, iv, Q2W 3.0 mg/kg, iv, Q2W Nivolumab 3.0 mg/kg, iv, Q2W

#### **Primary Endpoints**

Safety and tolerability

#### **Secondary Endpoints**

- ORR (investigator)
- DOR, DCR, TTR, PFS (investigator)
- PK profile

#### Stage Two: Dose Expansion

- Subject Population: same as stage one N = 14 (enrollment completed in June 2020)
- Treatment: GT90001 7.0 mg/kg, iv, Q2W Nivolumab 3.0 mg/kg, iv, Q2W





## ALK-1 (GT90001): Results of Phase II in Taiwan

#### **Safety Results**

- No DLTs were observed in the cohort A in dose de-escalation phase.
- In total, 20/20 (100%) patients ≥1 treatment-related AE, mainly mild to moderate and easily manageable.
- Treatment related grade 3-4 AEs were reported in 6 patients (30%), including platelet count decreased (n=3, 15.0%), skin rash (n=2, 10%), Aspartate aminotransferase increased(n=1,5%). No grade 5 AEs reported.
- 3 patients (15%) experienced treatment-related SAEs (renal dysfunction G2, hepatitis G2, hyperamylasemia G2).

**Efficacy Results** 

GT90001 (7 mg/kg) +	PR ORR		ORR	SD≥16weeks	DCR	DOR (N=8)	
Nivolumab (3 mg/kg)		(N=20)	(contirmed)	(N = 20)	(N=20)	> 12months	>6months
Number (%) of Patients	40% (8/20)	<b>40%</b> (8/20)	25% (5/20)	10%(2/20)	50% (10/20)	12.5% (1/8)	37.5 (3/8)

- As of 30<sup>th</sup> Sep. 2020, all 20 patients had received at least one non-baseline tumor evaluation.
- Eight (8) patients achieved PR while five (5) pts achieved confirmed PR. One patient has not yet reached confirmed PR.
- Six(6)patients remain on responding status.

#### **PK Analysis**

Tested Drug	AUC <sub>0-t</sub> (hr*μg/mL) N=6	CL (mL/hr/kg) N=6	T <sub>1/2</sub> (day) N=6	C <sub>max</sub> (μg/mL) N=6
GT90001	20160.9 ± 37.8	$0.23 \pm 0.08$	10.1 ± 5.1	159.3 ± 42.3
Nivolumab	7043.7 ± 46.1	0.179 ± 0.054	16.3 ± 4.3	50.3 ± 23.6

- In the combination, the pharmacokinetics of GT90001 and nivolumab were similar to those observed in monotherapy.
- Serum concentrations declined in a bi-exponential manner over the course of the treatment interval.
- GT90001 was slowly eliminated from the circulation.



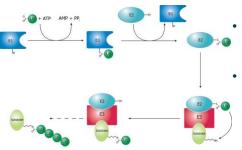
update date: 30-Sep-2020

# 6

# GT20029: Potential Candidate for AGA and Acne by Inhouse PROTAC Platform

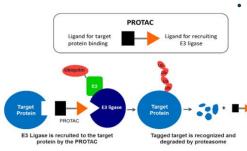
#### PROTAC: PROteolysis TArgeting Chimera

## Ubiquitinproteasome system(UPS) is a natural protein degradation process



- Much of the turnover of protein in cells is mediated by the UPS.
- Úsing the UPS to induce degradation of specific target proteins has been studied for decades.

#### PROTAC hijacks UPS in the cell to degrade target protein



PROTACs are heterobifunctional compounds comprising a recruiting element for a protein of interest (POI) and an E3 ligase recruiting element bound together via a linker. By bridging
 the gap between a POI and an E3 ligase and inducing their proximity, PROTACs can induce the ubiquitination of the POI and then degrading POI.

#### **MOA of GT20029**

It can selectively degrade Androgen Receptor in cell based assays. It will be applied locally to affected areas for treatment.

#### **Advantage of GT20029**

GT20029 has the totally different MOA for treating androgenetic alopecia and acne vulgaris. It has the potential to redefine the market given its treatment avoids notable side effects that have deterred users from accepting the treatment



It has all the advantages that pyrilutamide has over other treatments currently on the market.



#### Additionally:

- GT20029 could not permeate through skin owing to its physical properties and its blood level is undetectable while applied on the skin of the animals. Thus devoid of any mechanism based side effect.
- GT20029 shows potential in degrading mutant AR protein which will benefit the post AR antagonist treated patient.
- Since the protein will take time to regenerated once it is depleted, the treatment could last longer than antagonist.
- By circumventing the oral bioavailability problem of Protac molecule and pinpoint the effect protein degradation, this molecule has the potential to prove, for the first time, the effectiveness of Protac technology in drug discovery.



## Clinical Trials of GT20029

#### Phase I Clinical Trial in China CTR20211363

Completed first batch of subjects enrollment and dosing on July 28,2021

#### Trial Design

A randomized, double-blind, placebo-controlled phase I trial to evaluate the safety and pharmacokinetic profile of GT20029 gel/tincture in single and multiple topical doses in healthy subjects.

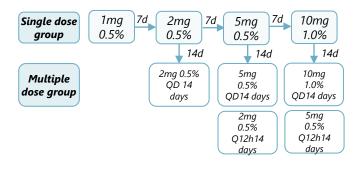
#### **Subject Recruitment**

**Stage 1**: GT20029 gel in single and multiple topical doses(largest subject No. is 68)

Single dose: 4 subjects in 1mg group, 8 subjects in the left groups.

Experimental group: Placebo group=3:1

Multiple doses: 8 subjects/group, Experimental group: Placebo group=3:1



Stage 2: GT20029 tincture in multiple topical doses(24 subjects)

Multiple doses: 8 subjects/group, Experimental group: Placebo group=3:1



#### Phase I Clinical Trial in the U.S.

Completed first batch of subjects enrollment and dosing on Feburary 1,2022

#### **Trial Design**

A randomized, double-blind, placebo-controlled Phase I trial to evaluate the safety, tolerability, and pharmacokinetics of GT20029 in subjects with single and multiple ascending doses of topical use.

#### **Subject Recruitment**

**Stage 1**: 40 healthy subjects, single ascending dose,5 dose groups,8 subjects/group

Single dose: Experimental group: Placebo group=3:1

Dose escalation based on safety and tolerability results from previous dose cohort, as determined by PI and medical regulation.



#### Stage 2:

Group A: 56 acne patients, multiple dose escalation, 7 dose groups, 8 people/group

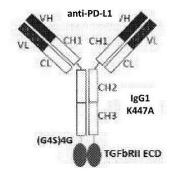
Group B: 56 male AGA patients, multiple dose escalation, 7 dose groups, 8 people/group. Experimental group: Placebo group=3:1





## PD-L1 / TGF-β Dual Targeting Antibody

#### **Advantage in Composition**



## With a high activity in **inhibiting both PD-L1 and TGF-\beta**.

Genetic engineering modification could reduce its degradation or fragmentation in CHO cell expression proteins, which makes it easier to be commercially produced and becomes a potential "best-inclass" drug

#### **Potential Indications and Market Opportunities**

#### Could be treatment for a variety of solid tumours, including:



#### Non-small cell lung cancer (NSCLC) 1L/2L

Lung cancer is one of the malignant tumors with the highest incidence and number of deaths. Among them, NSCLC accounts for more than 85%



#### Biliary tract cancer (BTC) 1L/2L

From 2019 to 2023, the CAGR of the global BTC treatment market will be close to 6%



#### Cervical cancer (CC) 2L

CC ranks the second in mortality rate of cancers among women. About 500,000 women are newly diagnosed with cervical cancer every year globally.



#### Nasopharyngeal carcinoma (NPC)

NPC is one of the high incidence of malignant tumors in China, and the incidence rate ranks the first among tumors of otolaryngology

Source: Merck KGaA Official Web, CDE, Technavo market research reports, Press Release



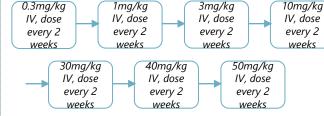
#### **Phase I Clinical Trial in China**

#### **Trial Design**

Phase I trial evaluating the safety, tolerability, pharmacokinetics, and preliminary efficacy of GT90008 in patients with advanced solid tumors.

#### **Subject Recruitment**

#### **Dose Escalation Phase (Phase Ia)**:3+3 scheme



0.3mg/kg, 1mg/kg, 3mg/kg(1 patient enrolled):

- No DLT and no ≥2 AE move to next dose group
- DLT occurence≥ 1or≥2 AE happens -enrollment continues until 3 patients in,then dose following the 3+3 scheme principle

Groups with dosage more than 10mg/kg (enroll 3 patients and follow 3+3 scheme principle ):

- No DLT among 3 patients -move to next dose group
- 1 DLT 3 more patients should be included
  - No DLT -move to next dose group
  - 1 DLT(2 DLT in total) move to the next lower dosage group

#### Dose Expansion Phase (Phase Ib)

According to the RP2D in phase Ia, once every two weeks, 28 days is a treatment cycle, 2~4 tumor types are selected, and 20~30 patients are enrolled in each group.

20mg/kg

IV. dose

every 2

weeks



## Detorsertib: mTORC1 and mTORC2 Dual Inhibitor

#### **Highlights**

- Detorsertib is a second-generation mTOR inhibitor that inhibits both mTORC1 and mTORC2
- ◆ Has shown greater therapeutic advantages as compared with firstgeneration mTOR inhibitors that only inhibit mTORC1.
- There was no mTORC1/mTORC2 dual inhibitor that had been approved for marketing globally.

#### Global ongoing clinical studies on mTORC1/2 dual inhibitor

Drugs		Company	Stage/Indications/Locations
Onatasertib (CC-223)	•	Antengene & Celgene	<ul> <li>Phase 2: NSCLC<sup>a</sup>, US</li> <li>Phase 2: HCC<sup>b</sup>, China/US/S Korea</li> <li>Phase 2: MM, US</li> <li>Phase 2: Non-Hodgkin lymphoma, US</li> <li>Phase 1: Diffuse large B-cell lymphoma, EU/US</li> </ul>
Detorsertib	•	Kintor	• Phase 1: Leukaemia and BCC, China/US
DFN-529	•	Diffusion Pharma	• Phase 1: Age related macular degeneration, US
XP-105	•	Xynomic	<ul> <li>Phase 1: Solid tumor, Germany/Belgium/Italy</li> </ul>
SCC-31	•	Shandong Luoxin	• Phase 1: Metastatic breast cancer

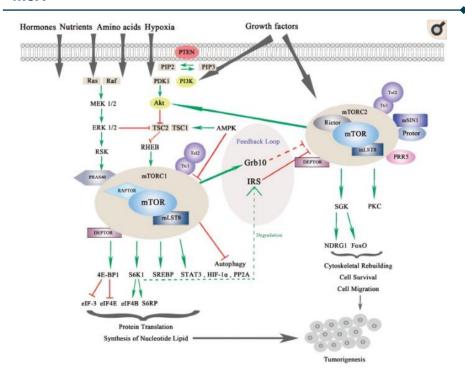
a. CC-223 combo with Erlotinib or Azacitidine; b. CC-223 mono.



#### Other drug candidates are in pre-clinical stage

- CMG-101(developed by CHA University, S. Korea, treatment for RCC)
- mTOR inhibitor (developed by Nankai University)

#### MoA





The **PI3K/AKT/mTOR signalling pathway** helps regulate various cellular functions, including cell proliferation, differentiation, apoptosis and nutrition.



First generation mTOR inhibitor only inhibits mTORC1 and has no efficacy on mTORC2, which can cause the activation of oncogene AKT and AMPK and drug resistance through mTORC2.



Detorsertib can **compete with the catalytic site of mTOR for ATP**, reducing the toxicity of dual inhibition of PI3K/mTOR without affecting the feedback pathway such as AKT.





## GT1708F: Hedgehog Signaling Pathway SMO Inhibitor

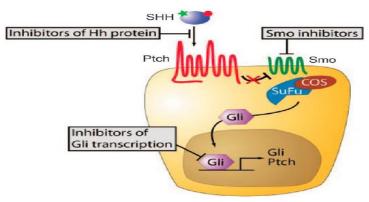
#### MoA

Tumour cells have abnormal activation of Hedgehog signalling pathway (PTCH, the patched, deletion or SMO overexpression) and overexpression of the target gene.

The occurrence of medulloblastoma and basal-cell carcinoma are associated with abnormal activation of the Hedgehog signalling pathway.

The Hedgehog signalling pathway is activated by up-regulating SMO in acute myeloid leukaemia cells and chronic myeloid leukaemia stem cells

The occurrence of chronic myeloid leukaemia in a mouse model can be reduced through the inhibition of SMO.



#### **Competitions**

Three approved SMO inhibitors in US/EU: **Glasdegib for AML** (Pfizer), **Sonidegib for BCC** (Novartis/Sun), **Vismodegib for BCC** (Genentech/Roche).

#### Drugs in clinical stage globally

Dung	Active Commence	Clohal Day
Drug	Active Company	Global Dev.
Glasdegib	Pfizer	Phase III, China
Sonideaih	Novartis AG; Sun Pharmaceutical Industries	<ul> <li>Phase 2: Basal cell nevus syndrome, US; Myelofibrosis: Switzerland</li> </ul>
Sonidegib Pha Ltd		<ul> <li>Phase 1: Myelodysplastic syndrome: France</li> </ul>
Vismodegib	Genentech Inc; Roche	<ul> <li>Phase 2: Meningioma / Head and neck tumor, US</li> </ul>
	Holding AG	• Phase 1: Odontogenic tumor, US
patidegib (topical	PellePharm Inc	• Phase 3: Basal cell nevus syndrome, US
gel)	renernann inc	• Phase 2: BCC, US/UK
NLM-001	Nelum Corp	<ul> <li>Phase 2: Pancreas tumor, US</li> </ul>

#### Kintor ranks the second among clinical trials in China

NO.	Drug Name	Active Company	Dev. in China
1	Glasdegib	Pfizer Inc	AML: Phase III
2	GT-1708F	Kintor Pharmaceutical Ltd	Leukaemia and BCC: Phase I
3	deuterated vismodegib analogs	Hinova Pharmaceuticals Inc	Preclinical
4	hedgehog signaling pathway inhibitors	Simcere Pharmaceutical Group	Preclinical
5	IMP-5471	IMPACT Therapeutics Inc	Preclinical
6	hedgehog pathway inhibitors	Zhejiang Academy of Medical Sciences	Preclinical
7	hedgehog signaling pathway inhibitors	Fudan University	Preclinical



Source: Prospectus

## (10)

## Integrated R&D Platform Spearheaded By Top Scientists



**Dr. Youzhi Tong** *Chairman, CEO & Founder* 

- 25+ years of experience in biopharm R&D and management
- Former VP of Angion Biomedica in the U.S.
- Former Assistant professor of Albert Einstein College of Medicine
- Ph.D. in pharmacology from Cornell; MA and BA in Chemistry from PKU







**Dr. Qun Lu** *Chief Technology Officer* 

- 20+ years of experience in CMC development in Pfizer, Merck and Celgene Corp./BMS
- Member of the board of directors of International Consortium for Innovation and Quality in Pharmaceutical Development
- Ph.D. in Physical Chemistry at Arizona State University; BA in Chemistry from PKU









**Dr. Xunwei Dong (M.D.)** *Chief Medical Officer* 

- 18+ years medical related experience in Novartis, Pfizer and GSK
- Previous Clinical Development Medical director of Novartis
- 10 years experience as an attending surgeon
- M.D. from Peking Union Medical College









**Lucy Lu**Chief Financial Officer ,
Joint Company Secretary

- 13+ years of experience in investment banking
- Former head of investment banking and managing director at GF Capital
- Executive director in the Asian healthcare group at UBS
- MA in Finance from Peking University; BA in Finance from Renmin University of China





CREDIT SUISSE



## Integrated R&D Platform Spearheaded By Top Scientists



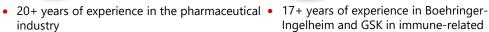
**Liandong Ma** Vice President, Head of Institute of R&D



- 20+ years of experience in the development of new oncology drugs, leading and participating in more than 10 oncology drug R&D projects, and bringing 4 drugs to the clinical stage
- MA and BA in medicine from Harbin Medical University



Dr. Ruo Xu Vice President R&D (Chemistry)



- Former Chief Scientist of Schering-Plough, and worked in Merck for more than 15 years
- Responsible for the design and synthesis of more than 7 small molecule inhibitors
- Ph.D. in chemistry from Columbia University; BA in chemistry from Peking University



Dr. Jianfei Yang Vice President R&D (Biologics)

- Ingelheim and GSK in immune-related drug R&D
- Published 12 papers as corresponding authors and holds 4 patents
- Ph.D. in pathology from Niigata University School of Medicine



Dr. Jiawen Han (M.D.) Vice President **Business Development** 

- 25+ years of experience in drug development and business operations
- Former VP of Oilu Boston and Wuxi AppTec Pharmaceutical Inc
- M.D. from Peking University, Ph.D. from University of Rochester School of Medicine

















**Juping Shen** Deputy General Manager

- 30+ years of experience in the pharmaceutical industry
- Worked in Otsuka, Eisai, Chiatai Tianging, Sanhome, Fresenius Kabi
- MA from East-South University; BA from Chinese Pharmaceutical University



Deputy General Manager

Dr. Jie Chen

- 10+years of experience in drug R&D
- Published nearly 20 papers and holds 4
- Working as guest researcher at Suzhou Research Institute of LICP
- Ph.D. in organic chemistry from Chinese Academy of Sciences







**Luke Cheung** Vice President Investment & International Commerce

- 15+ experience in financial and investment Former head of Leveraged & Acquisition Finance in Haitong International
- Master of Philosophy, Medical School, the University of Hong Kong; BSc in Biochemistry, the Hong Kong University of Science and Technology















Section 3

## Our Strategies

## **Our Strategies**



Rapidly advance the clinical development, regulatory approvals and commercial launch of pruxelutamide in COVID-19



Strategically progress the clinical development of pruxelutamide in oncology therapies



Continue the phase III/II clinical development of pyrilutamide for the treatment of AGA and acne in both China and the United States



Continue the clinical development of ALK-1 as a monotherapy and combination therapy and increase our focus on biologics R&D



Enhance our proprietary R&D capabilities to further the development of potential first-in-class and best-in-class drugs, particularly based on our PROTAC technology platform



Explore potential strategic partnerships with global pharmaceutical companies through licensing-in / licensing-out and co-development strategy





Section 4

## Financial Performance

## Income Statement(Adjusted)

	Year ended 3	31 December
	2020	2021
USD'000		
Revenue	-	5,382
Cost of Sales	<u> </u>	<u>-</u>
Gross Profit	-	5,382
Other Income	3,952	4,609
Marketing Costs	(1,357)	(2,311)
include: Share Incentive Scheme expenses	-	(860)
Administrative Expenses	(12,117)	(16,235)
include: listing cost	(3,264)	-
Share Incentive Scheme expenses	(1,231)	(1,879)
Research and Development Costs	(51,692)	(120,745)
include:Share Incentive Scheme expenses	(3,196)	(3,133)
Other Losses-net/Income-net	(18,165)	(2,713)
Operating Loss	(79,379)	(132,013)
Finance costs – net	(531)	(392)
Loss before Income Tax	(79,910)	(132,405)
Income tax expense	(11)	-
Total Loss	(79,922)	(132,405)
exclude: one-time expenses and non-cash items	7,692	5,872
Adjusted Total Loss	(72,230)	(126,533)

- Exclude one-time expenses and non-cash items( listing cost and Share Incentive Scheme expenses)
- The listing expenses in 2020 was RMB20.8M (USD3.27M), the equity incentive plan expenses was RMB28.2M (USD4.43M); The equity incentive plan expenses was RMB37.3M (USD5.87M).



## Key Financial Indicators Overview

#### **R&D Cost**

#### USD'000

# 120,745 2% 19% 19% 8% 13% 26% 18%



21%32%

## 2021 Employee benefit expenses

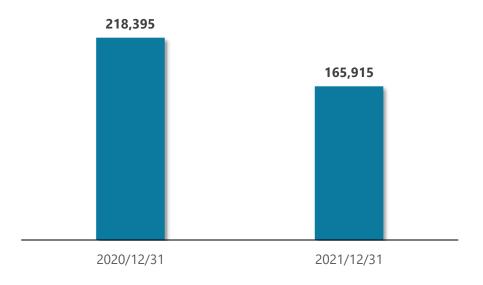
■ Materials and consumables expenses

Others

R&D costs increased by 133.6% YoY in 2021, mainly due to:(i) an increase of RMB344.2M (USD54.12M) in clinical research expenses paid to hospitals; (ii) employee benefit expenses increased of RMB27.8M (USD4.37M), including an increase of RMB19.9M (USD3.13M) in share incentive scheme expenses; (iii) Materials and consumables expenses increased of RMB59.0M (USD9.28M)

#### **Cash and Cash Equivalent**

#### USD'000



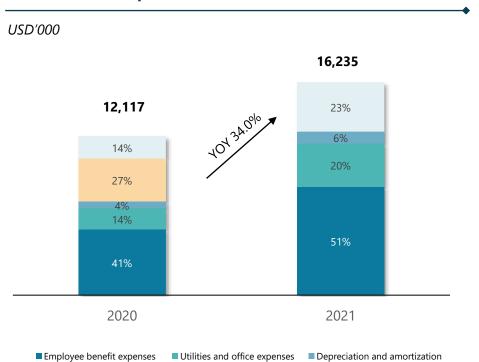
- Listed in HKEX in May 2020 with a net proceeds of approximately HK\$1.72 billion (USD221M).
- Completed a top-up placing in May 2021, with a net proceeds of approximately HK\$1.16 billion (USD149M)
- As of December 31, 2021, Kintor had RMB1.06 billion (USD167M) in cash on hand, including bank demand deposits, bank principalguaranteed deposit products and bank deposits; our used bank borrowing amount was RMB150M (USD24M), and the unused bank credit line was RMB150M (USD24M).



Note: USD/RMB=6.36, USD/HKD=7.8

## Key Financial Indicators Overview(Countinuing)

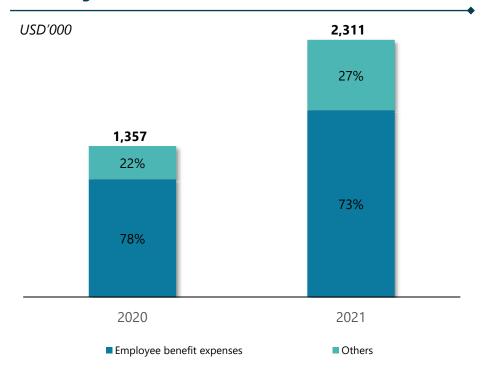
#### **Administrative Expenses**



Administrative expenses increased by 34.0% YOY in 2021, mainly due to: (i) employee benefit expenses increased by RMB20.6M (USD3.2M); ii) office and other general expenses increased by RMB10.7M (USD1.7M) as the office space was expanded; (iii) Listing expenses decreased by RMB20.8M (USD3.3M); (iv) Other administrative expenses increased by RMB13.1M (USD2.1M).

Others

#### **Marketing Costs**



• Distribution and marketing costs increased from RMB8.6M (USD1.4M) in 2020 to RMB14.7M (USD2.3M) in 2021, of which employee benefit expenses increased by RMB3.9M (USD0.6M), mainly due to the establishment and expansion the sales and marketing team preparing for the commercialization of Pruxelutamide.

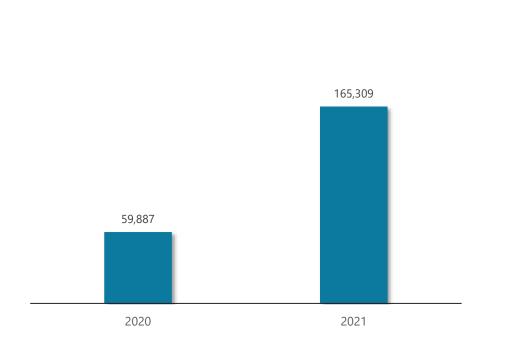


Listing expenses

## Key Financial Indicators Overview(Countinuing)

#### Net cash outflow from operating activities

## USD'000

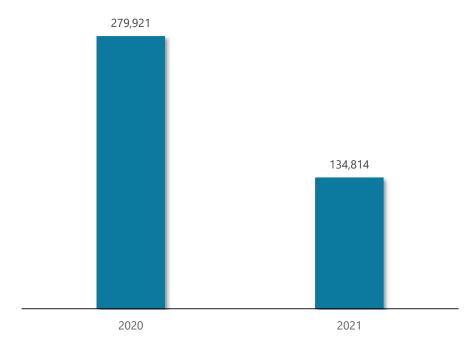


## • Net cash outflow from operating activities mainly includes R&D expenses and administrative expenses

 The significant YOY increase in R&D expenses in 2021 is mainly due to the increase in the cost of clinical trials for the COVID-19 indication of pruxelutamide and the increase in salary and welfare expenses due to the expansion of the R&D team; the increase in administrative expenses is mainly due to the welfare spending increase brought about by non-R&D employee team expansion.

#### **Net Cash Flows Generated from Financing Activities**





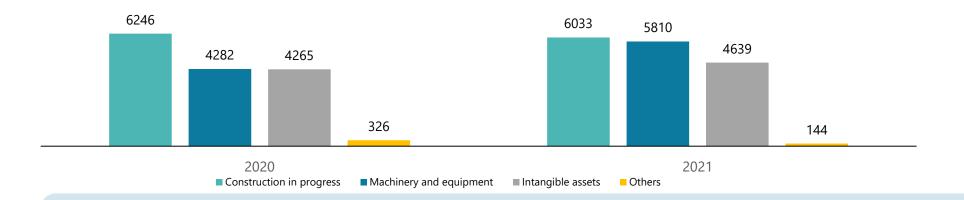
- Net cash inflow from financing activities in 2020 mainly includes IPO proceeds and bank borrowings
- Net cash inflow from financing activities in 2021 mainly comes from the top-up placing.



## Key Financial Indicators Overview(Countinuing)

#### **Capital Expenditures**

USD'000



- In 2020 and 2021, our capital expenditure amounted to RMB96.2M (USD15.1M) and RMB105.7M (USD16.6M), respectively. The increase was mainly due to the upgrading and transformation of the Suzhou factory to expand its production capacity and the procurement of experimental equipment for Zhuhai R&D Center in Guangdong, etc.
- We expect that the capital expenditure in 2022 will mainly be the design and construction expenditure of the new plant in Pinghu, Zhejiang, etc.



## **Income Statement**

	Year ended 31 December	
	2020	2021
USD'000		
Income	-	5,382
Cost of Sales		
Gross Profit	-	5,382
Other Income	3,952	4,609
Marketing Costs	(1,357)	(2,311)
Administrative Expenditures	(12,117)	(16,235)
R&D Costs	(51,692)	(120,745)
Other Losses-net/Income-net	(18,165)	(2,713)
Operating Loss	(79,379)	(132,013)
Finance costs – net	(531)	(392)
Loss before Income Tax	(79,910)	(132,405)
Income tax expense	(11)	<u>-</u>
Total Loss	(79,922)	(132,405)

- Our revenue mainly came from license-out income, other income came from interest income and government subsidies, and our main expenses were R&D and administrative expenses
- Among administrative expenses, salary and welfare expenses have increased significantly, and among R&D costs, clinical trial expenses and materials and consumables have increased significantly.
- The clinical trial of COVID-19 indication of Pruxelutamide has a large investment in 2021.



## **Balance Sheet**

	As at 31 December 2020 (Audited)	As at 31 December 2021 (Audited)
USD'000		
Assets		
Non-current assets		
Property, plant and equipment	27,455	35,171
Intangible assets	32,981	37,047
Right-of-use assets	1,897	6,071
Other non-current assets	5,412	6,945
	67,745	85,235
Current assets		
Inventories	-	55,246
Other receivables, deposits and prepayments	4,972	18,499
Time deposits	50,850	19,665
Restricted cash	-	261
Cash and cash equivalents	167,545	146,250
	223,367	239,921
Total assets	291,112	325,156
Liabilities		
Non-current liabilities		
Borrowings	21,211	23,192
Lease liabilities	77	435
Deferred income tax liabilities	6,103	6,103
Deferred income	<u> </u>	630
	27,391	30,360
10		



## Balance Sheet(Countinuing)

	As at 31 December 2020 (Audited)	As at 31 December 2021 (Audited)
USD'000		,
Current liabilities		
Trade and other payables	12,800	32,997
Borrowings	13,145	1,164
Lease liabilities	427	325
Deferred income	57	-
Amounts due to related parties	197	64
	26,625	34,550
Total liabilities	54,016	64,911
Equity		
Equity attributable to the equity holders of the Company		
Share capital	41	43
Shares held for the Employee Incentive Scheme	(3)	(3)
Reserves	237,058	260,205
Total equity	237,097	260,245
Total equity and liabilities	291,112	325,156



## **Cash Flow Statement**

	As at 31 December	
	2020	2021
USD'000		
Net cash used in operating activities	(59,887)	(165,309)
Net cash generated from/(used in) investing activities	(69,140)	14,466
Net cash generated from financing activities	279,921	134,814
Net (decrease)/increase in cash and cash equivalents	150,894	(16,028)
Cash and cash equivalents at the beginning of the year	30,744	167,404
Exchange losses on cash and cash equivalents	(14,234)	(5,726)
Cash and cash equivalents at the end of the year	167,404	145,650



### Disclaimer

By attending the meeting where this presentation is made, or by reading the presentation materials, you agree to be bound by the following limitations:

The information in this presentation has been prepared by representatives Kintor Pharmaceutical Limited (the "Company", and together with its subsidiaries, the "Group") for use in presentations by the Group. No part of this presentation should form the basis of, or be relied on in connection with, any contract or commitment or investment decision whatsoever.

No representation or warranty, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information, or opinions contained herein. Neither the Company nor any of the Company's subsidiaries, branches, affiliates, advisors or representatives shall have any responsibility or liability whatsoever (for negligence or otherwise) for any loss howsoever arising from any use of this presentation or its contents or otherwise arising in connection with this presentation. The information set out herein may be subject to updating, completion, revision, verification and amendment and such information may change materially.

This presentation is based on the economic, regulatory, market and other conditions as in effect on the date hereof. It should be understood that subsequent developments may affect the information contained in this presentation, which neither the Company nor its subsidiaries, branches, affiliates, advisors or representatives are under an obligation to update, revise or affirm.

The information communicated in this presentation may contain certain statements that are or may be forward looking. These statements typically contain words such as "will", "may", "expects", "forecasts", "plans" and "anticipates" and words of similar import. By their nature forward looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future. There may be additional material risks that are currently not considered to be material or of which the Company and its advisors or representatives are unaware. Against the background of these uncertainties, readers should not rely on these forward-looking statements. Neither the Company nor its subsidiaries, affiliates, advisors or representatives assume any responsibility to update forward-looking statements or to adapt them to future events or developments.

This presentation and the information contained herein does not constitute or form part of any offer for sale or subscription of or solicitation or invitation of any offer to buy or subscribe for any securities of the Company or any of its subsidiaries or affiliates in any jurisdiction. Neither this presentation nor anything provided herein shall form the basis of or be relied on in connection with, or act as an inducement to enter into any contract decisions or commitment whatsoever. This presentation and the information contained herein is being furnished to you solely for your information and may not be disclosed, reproduced or redistributed to any other person, in whole or in part. In particular, no information contained in this presentation may be, directly or indirectly, taken or transmitted into or distributed in the United States, Canada, Australia, Japan, Hong Kong or any other jurisdiction which prohibits the same except in compliance with applicable securities laws. Any failure to comply with this restriction may constitute a violation of U.S. or other securities laws. No money, securities or other consideration is being solicited, and, if sent in response to this presentation or the information contained herein, will not be accepted.

By attending this presentation you acknowledge that you will be solely responsible for your own assessment of the market and the market position of the Group and that you will conduct your own analysis and be solely responsible for forming your own view of the potential future performance of the business of the Group. Nothing in this presentation should be construed as regulatory, valuation, legal, tax, accounting or investment advice. Any decision to purchase securities in the context of a proposed offering of securities, if any, should be made solely on the basis of information contained in an offering circular or prospectus prepared in relation to such offering.

By reviewing this presentation, you are deemed to have represented and agreed that you and any customers you represent are either (a) a "qualified institutional buyer" (within the meaning of Regulation 144A under the U.S. Securities Act of 1933, as amended (the "Securities Act"), or (b) outside of the United States. You are also deemed to have represented and agreed that you and any customer you represent are professional investors as defined in the Securities and Futures Ordinance (Cap 571 Laws of Hong Kong) and any rules made under that Ordinance

