

CARsgen Therapeutics (HKEX: 02171)

June 2023

Making Cancer Curable

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Two leading programs in NDA/Pivotal Stages in North America and China



- Fully-human BCMA CAR T with potential best-in-class profiles
- First-in-class CLDN18.2 CAR T in pivotal trials

A suite of technology platforms



- Humanized/fully-human antibodies, in-house developed, targeting ~20 targets
- Autologous and allogeneic CAR T technologies

Vertically-integrated manufacturing



- Internal capability covering plasmid, lentiviral vector, CAR T cells
- Facilities in China and the U.S.

Experienced team in China and U.S.



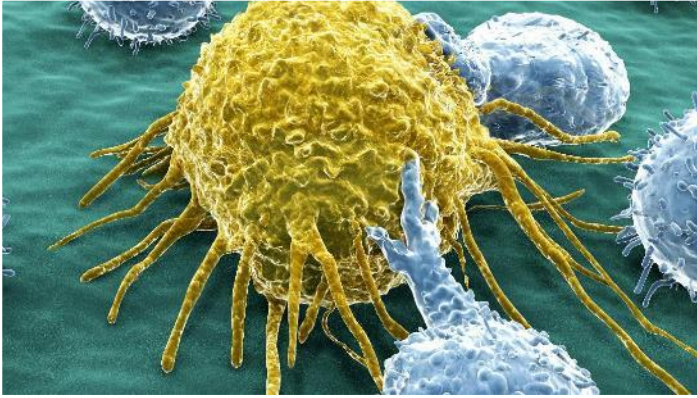
- Maximized synergies and operational efficiencies

Adequate Cash



- 2.3 Bn RMB by Dec 31st 2022. Expected runway into 2026

CAR T Cells: Initial Successes in B-cell Malignancies Unlocked a Journey of Significant Opportunities and Challenges



CAR T cells: ultimate solution to “cure” cancer



T cells: **pivotal** role in immune system



Rapid **expansion**



Flexibility in **engineering**



Clinically **proven**



Initial successes in B-cell malignancies

- Revolutionary efficacy and product approval in treatment of **B-cell malignancies**.
- Lack of breakthrough beyond B-cell malignancies



Challenges with CAR T, particularly for solid tumors

- Lack of ideal **target**
- Tumor **heterogeneity**
- Hostile tumor **microenvironment**



What it takes to develop effective CAR T-cell therapies

- **Insight**
- **Infrastructure** in R&D and manufacturing
- Operational **efficiency**

Since 2014, CARsgen Has Been a Pioneer in CAR T-cell Research and Development



Research



Discovery and innovation



Cancer Types

- GBM, HCC, GC, PAAD, etc.



Targets

- First-in-class GPC3 CAR T (CT011)
- First-in-class CLDN18.2 CAR T (CT041)



Combinations

- e.g. CAR T + TKI



Lympho-depletion

- e.g. FNC regimen (FC + Nab-Paclitaxel)

Development



Antibodies



In-house antibody development platforms

- Phage display
- Hybridoma



Humanized/fully-human antibodies developed against **~20 targets**

CAR T technologies



A suite of proprietary technologies

- For both **autologous** and **allogeneic CAR T cells**
- For both **hematological malignancies** and **solid tumors**

Experienced Senior Management Team in China & US



Zonghai Li, MD, PhD
Co-founder, Chairman of
the Board, CEO, CSO



Huamao Wang, PhD
Co-founder and COO



Raffaele Baffa, MD, PhD
Chief Medical Officer



Richard Daly, MBA
President, CARsgen
Therapeutics Corporation



Leigh Hsu, PhD, MBA
Senior Vice President,
Business Development



Sylvie Peltier, PharmD, MHL
Senior Vice President
Global Regulatory Affairs



Hong Ma, MD, MS, MBA
Senior Vice President
Clinical Development



Jie Jia, PhD
Vice President
Strategic Alliances and
Operations



Hua Jiang, MD, PhD
Vice President, Early
Discovery



Caihua Jiang
Senior Vice President,
Quality



Guanjun Zhou, PhD
Vice President,
Government Relations



CARsgen's Competitive Product Pipeline with Global Rights



	Product Candidate ¹	Technology	Target	Indication	Pre-clinical	Phase I	Phase II/III ²	BLA NDA
CAR T-cell therapies	Zevor-cel (CT053) ³	Conventional	BCMA	R/R MM	LUMMICAR 1 (China)			
				R/R MM	LUMMICAR 2 (US, Canada)			
				R/R MM	IIT (China)			
	CT041		Claudin18.2	GC/GEJ	ST-01 (China)			
				GC/PC	ST-02 (US, Canada)			
				PC (adjuvant)	(China)			
				GC/GEJ, PC, etc.	IIT (China)			
	CT011	sFv-ε	GPC3	HCC	(China)			
	CT0180		GPC3	HCC	IIT (China)			
	CT0181		GPC3	HCC	IIT (China)			
	CT0590	THANK-uCAR®	BCMA	R/R MM	IIT (China)			
mAb	CT048	CycloCAR®	Claudin18.2	GC/GEJ and PC	IIT (China)			
	CT071	Undisclosed	GPRC5D	R/R MM	IIT (China)			
	KJ-C2113	CycloCAR®	Mesothelin	Solid tumors				
	KJ-C2114	THANK-uCAR®	Undisclosed	Solid tumors				
	KJ-C2320	Undisclosed	Undisclosed	AML				
	AB011		Claudin18.2	GC/GEJ and PC GC/GEJ	Mono & Combo (AB011+CAPOX) (China)			
					AB011+atezolizumab+CAPOX (China)			

¹ All product candidates are self-developed with global rights

² Phase II trials of some indications are pivotal studies

³ Core Product Candidate. Commercial rights in mainland China have been granted to Huadong Medicine (SZ: 000963). Rights in the South Korean market have been licensed out to HK Inno.N (KOSDAQ: 195940)

➤ for hematologic malignancies ➡ for solid tumors

R/R MM: relapsed / refractory multiple myeloma; GC: gastric cancer; GEJ: gastroesophageal junction cancer; PC: pancreatic cancer; HCC: hepatocellular carcinoma; AML: acute myeloid leukemia

Zevor-cel (CT053): a Potential Best-in-class BCMA CAR T



Zevor-cel Highlights



- ✓ Optimized scFv with enhanced binding affinity and stability
- ✓ Competitive efficacies
- ✓ Excellent safety
- ✓ Fast-to-market
 - NDA accepted by China NMPA (Oct 2022);
 - Phase 2 trial in North America: Ongoing
- ✓ Designations: RMAT (FDA), PRIME (EMA), Orphan Drug (FDA & EMA); Breakthrough Therapy Drug (NMPA)

38 heavily pretreated R/R MM patients (IIT + China Phase 1)¹

• High Disease Burden

Extramedullary disease
31.6%

High-risk cytogenetics
50%

• Competitive Efficacy and Safety Profile

ORR
92.1%

sCR/R
78.9%

mPFS
22.7 mos

mDOR
24.0 mos

Treatment-related death
0%

≥Grade 3 CRS
0%

≥Grade 3 Neurotoxicity*
2.6%

*epilepsy (fully resolved after methylprednisolone treatment)



1. Chengcheng Fu, et al. ASH 2021. Abstract 1751.

CT041: First-in-class CLDN18.2 CAR T with Breakthrough Efficacy Data¹



CT041 Highlights

- ✓ First-in-class CLDN18.2 CAR T
- ✓ Optimized scFv with enhanced binding affinity and stability²
- ✓ Optimized preconditioning
 - (FC + low-dose Nab-Paclitaxel)
- ✓ Globally first solid tumor CAR T in pivotal trial
 - Confirmatory Phase II trial in China: Ongoing
 - Phase 1b/2 trial in North America: Ongoing
- ✓ Designations: RMAT (FDA), PRIME (EMA), Orphan Drug (FDA & EMA)

nature
medicine

ARTICLES

<https://doi.org/10.1038/s41591-022-01800-8>

Check for updates

OPEN

Claudin18.2-specific CAR T cells in gastrointestinal cancers: phase 1 trial interim results

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18 GC/GEJ patients who had failed at least 2 prior lines of therapies at a dose 2.5×10^8 CAR T cells.

ORR
61.1%

DCR
83.3%

DOR rate at 6 months
57.1%

mPFS*
5.6 mos

mOS*
9.5 mos

*PFS and OS above were calculated from CAR T infusion date.

SOC in GC/GEJ patients who had failed at least 2 prior lines of therapies

Lonsurf (trifluridine/tipiracil) TAGS³

Opdivo (Nivolumab) ATTRACTION-2⁴

ORR
4.5%

mPFS
2.0 mos

mOS
5.7 mos

ORR
11.2%

mPFS
1.6 mos

mOS
5.3 mos

1. Qi C, et. al. *Nat Med*. 2022 Jun;28(6):1189-1198
2. Jiang H, et al. *J Natl Cancer Inst*. 2019;111(4):409-418
3. Shitara K, et. al. *The Lancet Oncol*. 2018;19(11):1437-1448
4. Kang, Yoon-Koo et al. *The Lancet*. 2017;390(10111):2461-2471

A Suite of Technology Platforms to Empower the Development of Next-Generation CAR T-cell Products



4 Strategic Pillars

to address major challenges of CAR T-cell therapies



Efficacy against Solid Tumors

CycloCAR[®] co-
expression of IL-
7 + CCL21



Safety Profile

**Minimize
safety
concerns**
including CRS,
neurotoxicity



Patient Accessibility

Allogeneic
THANK-uCAR[®]
technology



Target Availability

LADAR[®]
technology for
precise
targeting

CARsgen: Global reach with integrated R&D and Manufacturing capabilities complemented with synergistic partnership



Shanghai

Headquarter, research, clinical development, two GMP manufacturing facilities



Durham, North Carolina

CGMP manufacturing facility

Houston, Texas

Clinical development

Partnerships



Huadong Medicine (SZ: 000963)

Exclusive commercialization of zevor-cel in mainland China



Roche

Clinical collaboration for AB011 plus Atezolizumab



HK Inno.N (KOSDAQ: 195940)

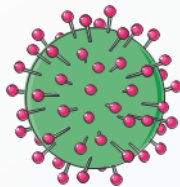
License of zevor-cel and CT032 in the Republic of Korea

Integrated Internal Capabilities to Maximize Development Speed, Robust Clinical/Commercial Supply, and Competitive Cost



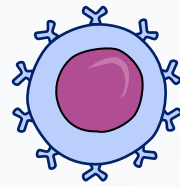
Plasmid

Clinical grade Plasmid DNA up to multiple-gram per batch



Lentiviral vectors

One batch of lentiviral vectors can support **hundreds of** batches of CAR T cells



CAR T cells

- Manufacturing success rate **>95%**
- Clinical grade CAR T cells up to 3×10^{10} cells/lot

Central lab

GLP, GCP compliant platforms covering

- Method development and validation
- Clinical sample test (PK/PD, immunogenicity, new biomarkers)

Companion Diagnostics

CDx development and registration

- CLDN18.2
- GPC3
- New Biomarkers

Bioprocess Analysis

Regulatory compliant well-characterized assays

- Kits development and manufacturing
- Cell/Molecular/Immunology assays

Nucleic acid and protein manufacturing

GMP grade nucleic acid and protein manufacturing for both clinical and commercialization

- Nuclease
- Guide RNAs
- Recombinant proteins & antibodies

Harnessing Manufacturing Capabilities in China and the U.S. for Maximized Synergies and Flexibilities



Xuhui, Shanghai

~200 CAR T batches annually



Jinshan, Shanghai

~2000 CAR T batches annually



Raleigh-Durham, North Carolina

~700 CAR T batches annually



“In China for global markets”

Lentiviral vectors

- CARsgen Shanghai Facility has been the manufacturer of lentiviral vectors for clinical trials the U.S.

CAR T cells

- Exploring using CARsgen shanghai facility to supply CAR T cells for global market

CARsgen's Strategic Development Roadmap



Establish Extend Explore



Establish

Registration of the first indications for **zevor-cel** (BCMA) and **CT041** (CLDN18.2)

(Fast-to-market)

Extend

- Earlier lines of therapies
- New cancer types

(Maximize the value)

Explore

- Combination
- New technology
- New Targets
- Allogeneic

(Explore the uncharted)

Multiple Value Inflection Milestones in 2023 and 2024



Zevor-cel (BCMA CAR T)

- NDA approval from NMPA in China
- BLA submission in the US in 2024

CT041 (CLDN18.2 CAR T)

- Initiated Phase 2 in North America in the first half of 2023 (in May)
- Submit an NDA to the NMPA in China in the first half of 2024

New Products /New INDs

- Multiple INDs for earlier lines of therapies for existing products
- Multiple new products: CT071 (GPRC5D) for MM, KJ-C2320 for AML, etc.

Financial Highlights – Higher Adjusted Loss to Fund R&D Adequate Cash into 2026



Selected Consolidated Financial Information

(RMB'000)	Year ended December 31	
	2022	2021
Research and Development Expenses	-680,301	-501,721
Operating Losses	-881,297	-573,905
Fair Value Loss in financial instruments issued to investors	-	-4,155,572
Loss for the year	-892,247	-4,744,423
Adjusted net loss*	-848,252	-548,767
	As at December 31, 2022	As at December 31, 2021
Cash, Cash equivalents and Terms deposits	2,268,036	3,006,938
Bank borrowings	7,373	226,706



2023 Guidance

Continue to strengthen R&D efforts

Estimate of full year 2023 financial performances:

Expected adjusted net loss and net loss at similar level as those in 2022.

Cash, equivalents and deposits at the end of 2023 are expected to be

≥ 1.6 billion RMB

Expected adequate cash into

2026

* Adjusted net loss represent the net loss excluding the effect of certain non-cash items and one-time events, namely the fair value loss of the financial instrument issued to investors, the listing fee and share-based compensation.



Zevor-cel: Potential Best-in-class BCMA CAR T

Multiple Myeloma: Significant Unmet Medical Needs

The 2nd most common hematologic malignancy

- An estimated ~560K patients worldwide will have MM by 2027

2022 Epidemiology



MM has a lower 5-year survival rate than other blood cancers (2000-2016 data)

5-year survival	Global ¹	US ²	China ¹	Japan ¹
Lymphoma	40-70%	68%	38%	57%
MM	30-50%	50%	25%	33%

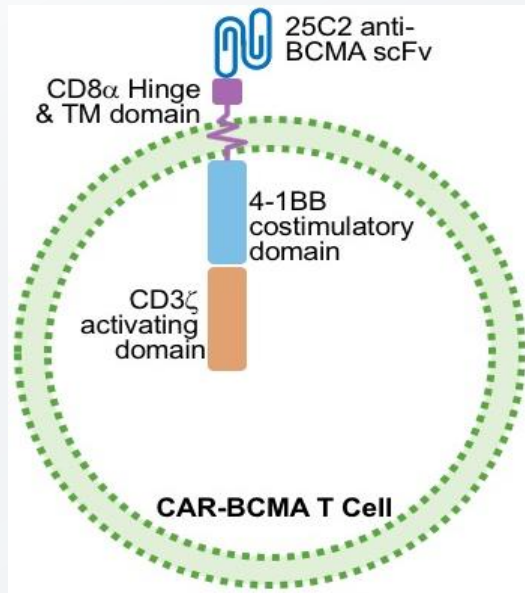
1. Allemani C, et. al. *The Lancet*. 2018 Mar 17;391(10125):1023-1075

2. Surveillance, Epidemiology, and End Results (SEER) Program; US, United States

Zevor-cel (CT053): BCMA CAR T with Optimized scFv to Enhance Efficacy and Safety

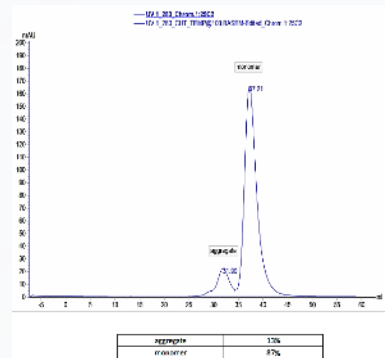
High Binding affinity (pM level)¹

	KD(M)
BCMA	4.548E-10



High stability

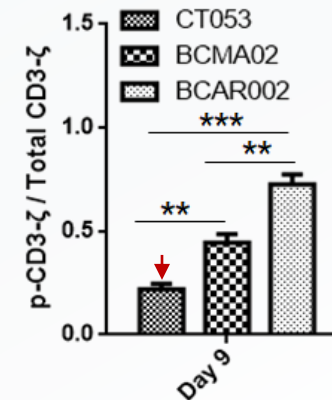
High Monomer Ratio
(~90%)



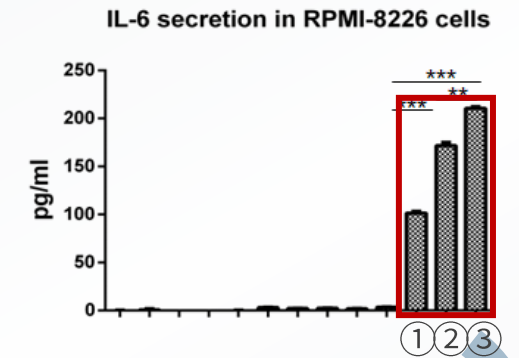
Reduced antigen-independent clustering

*BCMA02 CAR was made according to the construct ABECMA®
 **BCAR002 CAR was made according to the construct of CARVYKTI™

Less CD3 autophosphorylation than ABECMA® and CARVYKTI™



Less IL-6 expression than ABECMA® and CARVYKTI™



- ① CT053
- ② BCMA02 CAR
- ③ BCAR002 CAR

1. Yang, Min et al. *Haematologica* vol. 107,8 1960-1965. 2022 Aug 1

IIT and LUMMICAR-1 Efficacy and Safety Data



	China investigator-initiated trials ¹	China Phase I (LUMMICAR-1) ²	China Phase II (LUMMICAR-1) ³
Sample size	24	14	102 (60 with at least 12w follow-up for efficacy analysis)
EMD+	41.70%	14.30%	6.70%
High risk Cytogenetic	50%	50%	58.30%
Prior therapies	5 (2-11) regimens	6 (3-11) regimens	6 (3-17) regimens
ORR	87.50%	100%	91.70%
CR/sCR rate	79.20% (41.7% with ~6 M median follow up; 70.8% with ~9 M follow-up; 79.2% with ~15 M follow-up)	78.60%	56.70% (34/60, not mature)
≥VGPR rate	83.3% (20/24)	92.9% (13/14)	86.7%
Median follow-up	17.4 months	13.6 months	8.7 months
mDOR	21.8 months	12m-rate 100%	6m-rate 96.1%
mPFS	18.8 months	12m-rate 85.7%	6m-rate 91.2%
MRD negative	/	100% (11/11)	96.3% in patients with ≥VGPR
≥Grade 3 CRS	0	0	4.9%
≥Grade 3 NT	1/24 (4.2%)	0	0
Treatment related death	0	0	1

1. Yang M, et. al. *Haematologica*. 2022 Aug 1;107(8):1960-1965

2. Chen W, et. al. ASH 2021. 2021 Dec; Abstract #2821

3. Unpublished data, Efficacy based on IRC evaluation

LUMMICAR-2 Phase 2: Preliminary Data Suggest Competitive Efficacy and Safety Profile in the US



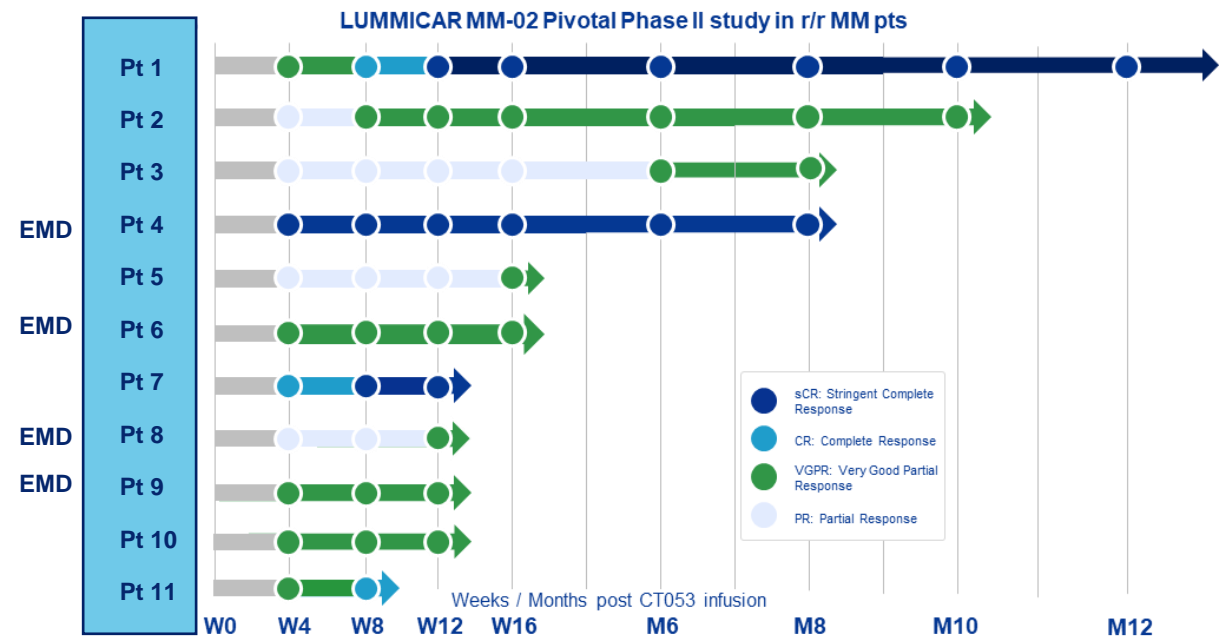
Competitive efficacy

- 100% responses at Week 4 (VGPR, CR or sCR) and ongoing
- Responses deepened with longer follow-up
- 100% MRD negative in all patients with available results at Week 4 by next-generation sequencing

Sample size	17 treated, 11 evaluated
Patient Population	5/17 (29.4%) EMD 9/17 (52.9%) high risk
No. of prior therapies, median (range)	6 (4-17)
ORR	11/11 (100%)
CRS	10/17 (59%)
Grade 1 CRS	6/17 (35%)
Grade 2 CRS	4/17 (24%)
≥Grade 3 CRS	0
ICANS	3/17 (17.6%)
Grade 1 ICANS	2/17 (11.8%)
Grade 2 ICANS	0
Grade 3 ICANS	1/17 (5.9%)
Toxicity Mgmt: tocilizumab	5/17 (29%)
Toxicity Mgmt: corticosteroid	1/17 (5.9%)
Treatment related death	0

Best-in-class safety profile

- No treatment related death, no patient was admitted to ICU for CRS/ICANS
- No grade 3 or higher CRS (41% without any grade of CRS)
- 1/17 (5.9%) Grade 3 ICANS and fully resolved; No parkinsonism
- Minimal use of medication for toxicity mgmt (29% tocilizumab rate)
- 3 patients have received outpatient treatment



Data cutoff date: August 19, 2022

A photograph of an elderly couple smiling in front of green foliage. The man on the left has white hair, a beard, and glasses, wearing a grey jacket. The woman on the right has white hair and is also smiling, wearing a grey jacket. They are standing in front of a dense background of green plants with small yellow and red flowers.

Claudin18.2 Franchise Pipeline Products

Addressing Large Population of CLDN18.2 Positive Tumors with Significant Unmet Medical Needs



According to *Global Cancer Statistics 2020*:

>1.5 million incident case for just gastric cancer and pancreatic cancer combined worldwide

	Gastric cancer		Pancreatic cancer	
Incidence	1,089K		496K	
Mortality	769K		466K	

Gastric Cancer



5-year survival rate of advanced gastric cancer is 5-20%

3L+

ORR
4.5%

mPFS
< 2 mos

mOS
< 6 mos

Pancreatic Cancer



5-year survival rate ~6%

2L+

No effective SOC

Claudin18.2 Franchise Offers a Comprehensive Multi-Modal Solution for Patients



CT041

First-in-class Claudin 18.2
CAR T

AB011

Globally second IND cleared
Claudin 18.2 mAb (first humanized)

CT048

IL-7 and CCL-21 co-expression
to enhance efficacy

CARsgen proprietary
CLDN18.2 IHC test kit with
high sensitivity and specificity

Gastric Cancer



($\geq 1+$, any percentage)

77%

Pancreatic Cancer








($\geq 1+$, any percentage)

66%

CT041: Global First-in-Class CAR T for CLDN18.2-Positive Solid Tumors



Product 	Designations 	Clinical Development Plan 
<ul style="list-style-type: none">• Optimized scFv¹<ul style="list-style-type: none">✓ High binding affinity✓ High stability	<ul style="list-style-type: none">• RMAT (FDA)	 Confirmatory Phase II trial in China: Ongoing Plan to submit the NDA in 1H2024
<ul style="list-style-type: none">• Innovative FNC (FC + low-dose Nab-Paclitaxel) preconditioning regimen to enhance penetration and anti-tumor effect of CAR T cells	<ul style="list-style-type: none">• PRIME (EMA)	 Phase 1b/2 trial in North America: Ongoing
	<ul style="list-style-type: none">• Orphan Drug (EMA & FDA)	<p>Expansion of clinical development in</p> <ul style="list-style-type: none">• earlier lines of therapy• additional claudin18.2 positive cancers

1. Jiang H, et al. *J Natl Cancer Inst.* 2019;111(4):409-418

CT041: Consistent Data Trend Reported in ASCO 2022 for Phase 1 trials in China and the US

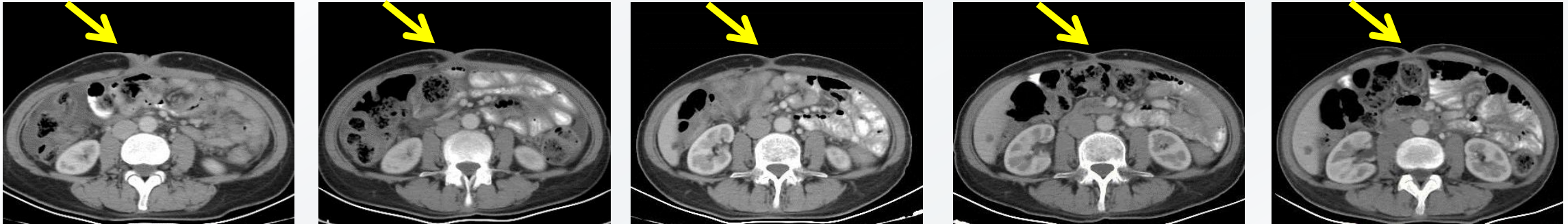


	China investigator-initiated trials (NCT03874897) ¹	Phase Ib/II in China (NCT04581473) ²	Phase 1b in the US (NCT04404595) ³
Sample size	28 GC/GEJ 5 PC 4 other cancers	14 GC/GEJ	5 GC/GEJ 9 PC
ORR in GC/GEJ	61.1%*	57.1%	60%
Median follow-up	7.6 m*	8.8 months	/
mPFS	5.6 months*	5.6 months	Not reached
mDOR	6.4 months*	/	Not reached
mOS	9.5 months*	10.8 months	/
≥Grade 3 CRS	0	1**	0
≥Grade 3 ICANS	0	0	0
Treatment related death	0	0	0
<p>*18 patients with GC/GEJ who had failed at least 2 prior lines of therapies at a dose 2.5×10^8 CAR T cells. **One patient was related to the investigational disease and fully recovered after corticosteroids treatment.</p>			

1. Qi C, et. al. *Nat Med*. 2022 Jun;28(6):1189-1198
2. Qi C, et. al. ASCO 2022. 2022 Jun; Abstract #4017
3. Botta G, et. al. ASCO 2022. 2022 Jun; Abstract #2538

Case Sharing : Long-term Tumor Response

Pt08, 57/F, GC with peritoneal metastasis and Sister Mary Joseph nodule, had received 3 prior lines of therapy including PD-1 antibody, achieved PR and ongoing response more than 56 weeks, CLDN18.2 2+ 80%.



Pre-infusion

Post-infusion W4

W12

W24

W40

AB011: Globally First IND Approved Humanized CLDN18.2 mAb



Competitive Advantages

- The **first** CLDN18.2-targeted mAb developed in China that has received **IND clearance** from the NMPA
- Potentially **more potent anti-tumor activity** compared to current industry frontrunner

Clinical Trial and Plan

Excellent tolerability, safety and efficacy

Clinical Trial Overview

- Phase I dose-escalation and dose-expansion (**mono therapy**) enrollment completed
- Phase I dose-escalation (**AB011 + chemo**) enrollment completed
- Phase I dose expansion (**AB011+chemo**) enrollment completed

Clinical Development Plan

- Clinical partnership with **Roche** for combination with atezolizumab being explored

CLDN18.2 CDx

- CARsgen's proprietary CLDN18.2 IHC test kit being developed as CDx
- High sensitivity and specificity

Compelling Efficacy of AB011+chemo Reported for 1L GC/GEJ in ASCO GI 2023



ASCO Gastrointestinal
Cancers Symposium

A Multicenter, Phase 1 Study of AB011, a Recombinant Humanized Anti CLDN18.2 Monoclonal Antibody, as Monotherapy and Combined with Capecitabine and Oxaliplatin (CAPOX) in Patients with Advanced Solid Tumors

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#G123

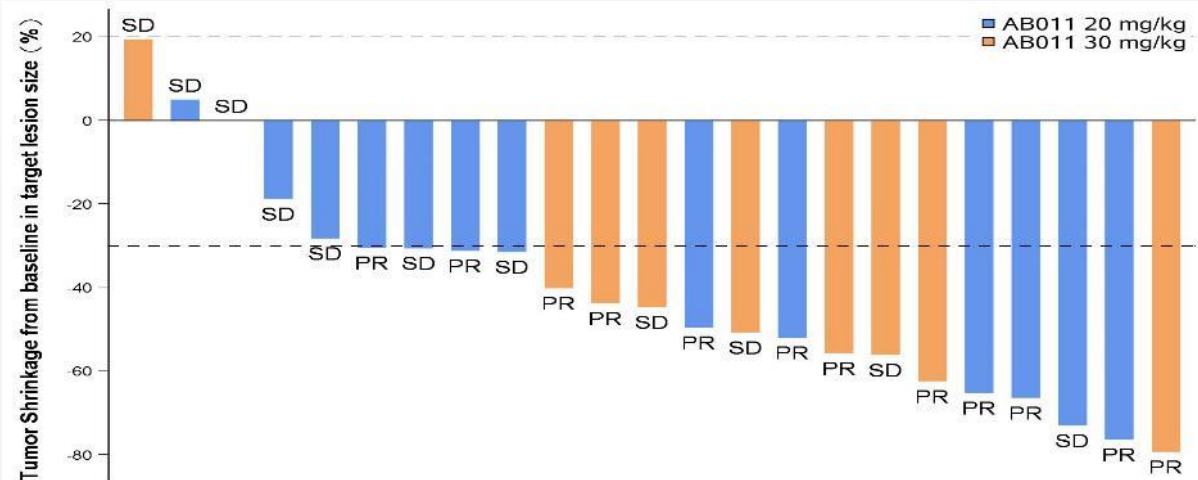
PRESENTED BY: Dr. Jin Li

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ASCO
KNOWLEDGE CONSIDERS CANCER

Completed Phase 1 Enrollment (NCT04400383)¹

- AB011 monotherapy
- AB011 + CAPOX



A close-up portrait of an elderly man with dark, curly hair and a white mustache, smiling warmly. The background is a soft-focus green, suggesting foliage. The image is partially obscured by a semi-transparent white banner at the bottom.

GPC3 Pipeline Products



Hepatocellular Carcinoma: The Third Leading Cause of Cancer Mortality Worldwide

2022 HCC Epidemiology in the US and China



HCC 5-year survival rate

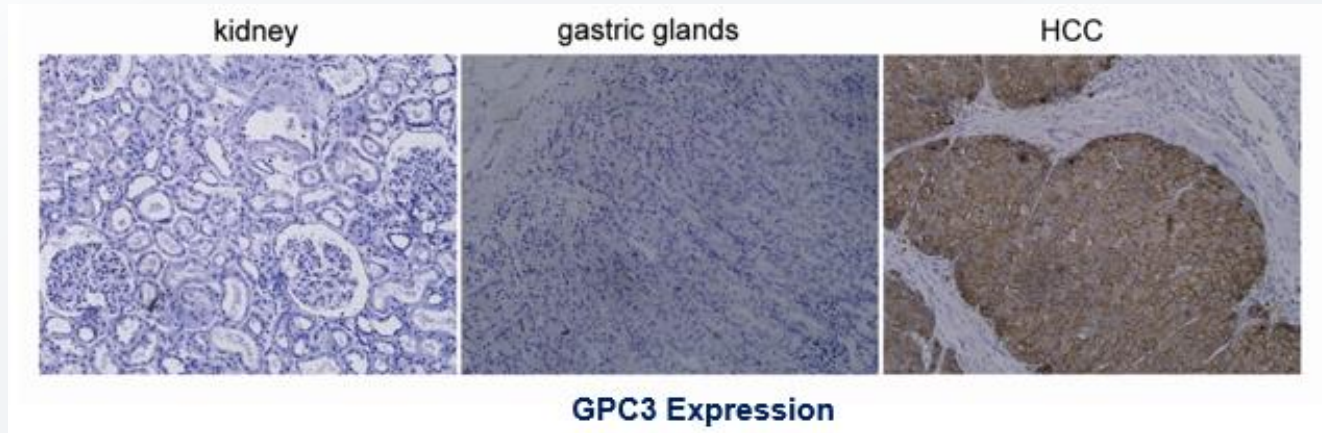
	Global ¹	US ²	China ³
HCC, all stages	18%	20%	12%

1. Lin L, et al. *Liver Cancer*. 2020 Sep;9(5):563-582
2. 2022 American Cancer Society medical information
3. Zheng R, et al. *Chinese Journal of Cancer Research*, 2018 Dec;30(6):571-579

GPC3 is an Ideal Target for CAR T Cells to Treat HCC

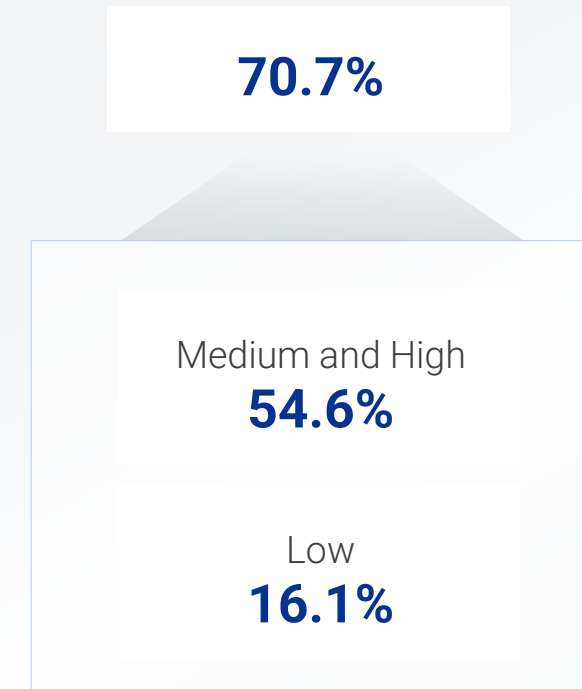
GPC3: high expression and specificity

- GPC3 is a cell surface protein that belongs to the acetyl heparan sulfate proteoglycan family
- High expression in HCC and no expression in other 21 tested tissues, including heart, spleen, lung and kidney



- GPC3 is also overexpressed in other cancer types
>60% of lung squamous cell carcinoma (SCC)

GPC3 Expression in HCC with CARsgen IHC test*

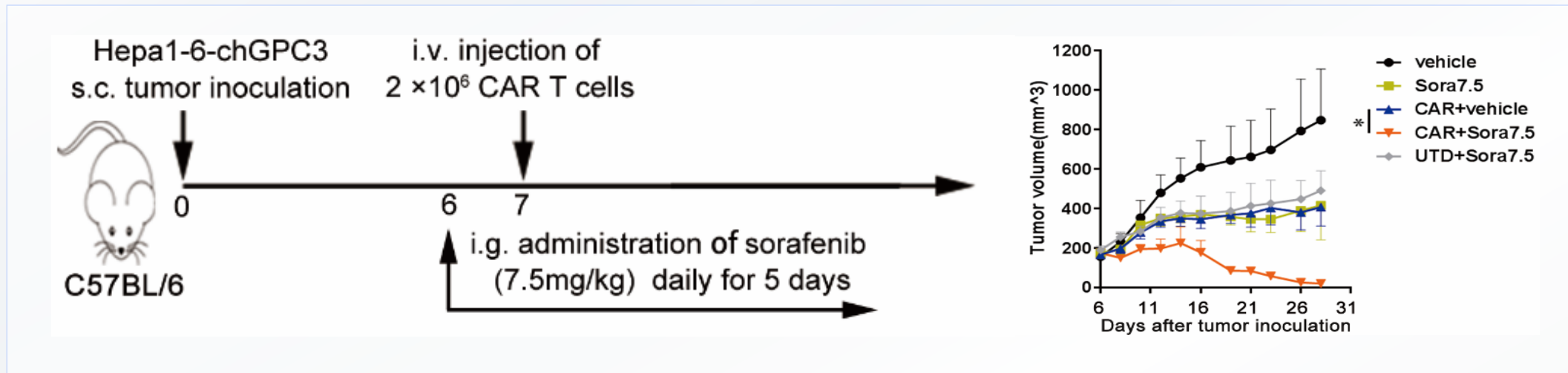
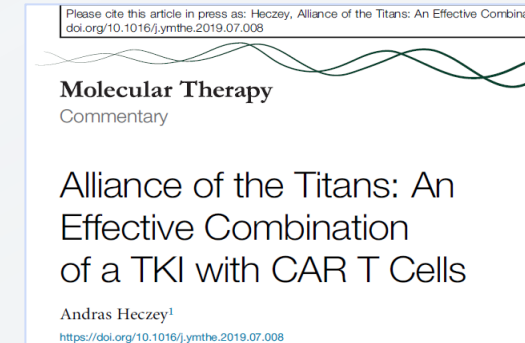


*CARsgen internal data

GPC3 CAR T in Combination with Sorafenib in HCC Mouse Models

Synergistic effect of CAR T cells and Tyrosine Kinase Inhibitors

- Sorafenib augmented the antitumor effects of mCAR T cells¹
- Promoted IL-12 secretion in tumor associated macrophages (TAMs) and cancer cell apoptosis



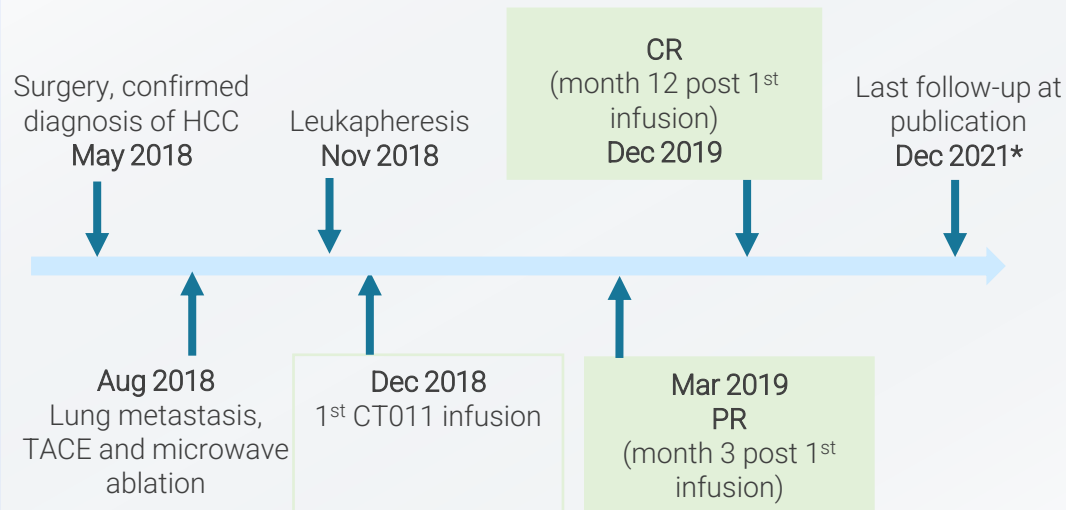
1. Wu X, *Mol Ther.* 2019 Aug 7;27(8):1483-1494

Case Report in *Frontiers in Immunology*: Complete Response and Long-term Survival (CT011 + Sorafenib for 1L HCC)

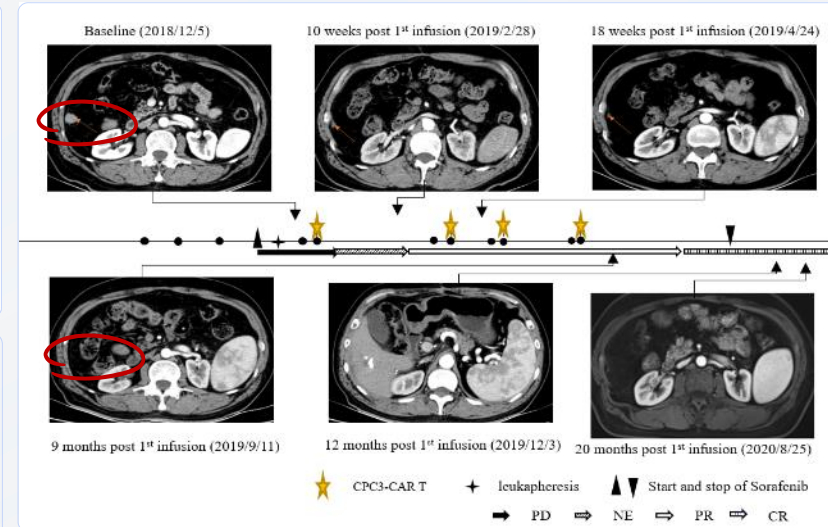
Clinical evidence supporting the curative potential of CAR T cells in early-line treatment of solid tumors¹

NCT03302403

- A 60-year-old Asian male with HBV related HCC
- Liver recurrence and lung metastasis
- Previously treated with liver tumor resection, trans-arterial chemoembolization therapy and interventional ablation.
- GPC3 IHC test: ++ and +++ 70%

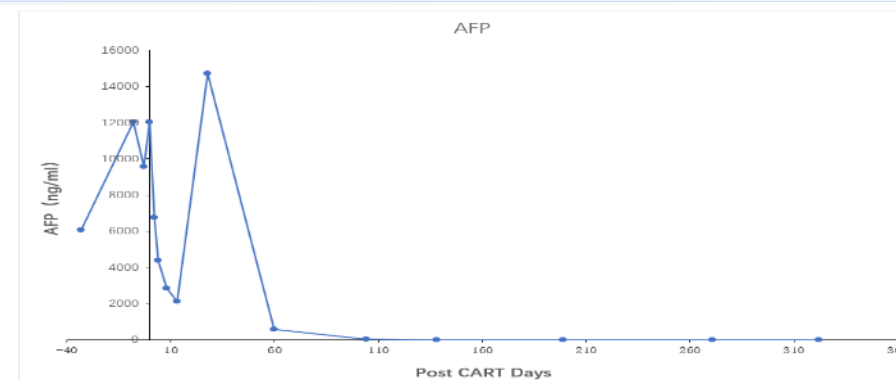


*As of Dec 2021, CR status has been over 24 months and continues



No. 3 target lesion

- ~16.76 mm at baseline
- At 9 months, this lesion completely disappeared without relapse



The AFP level declined to a normal value 3 month post 1st infusion

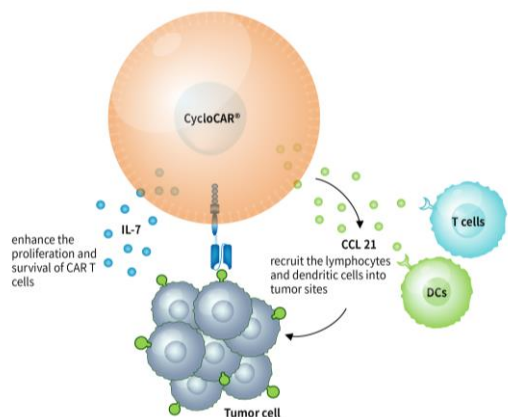
1. Sun, Hongwei, et al. *Frontiers in Immunology*. 13 (2022)



Technology Platforms

CycloCAR[®]: Enhanced Anti-tumor Effect and Potentially Lymphodepletion Free

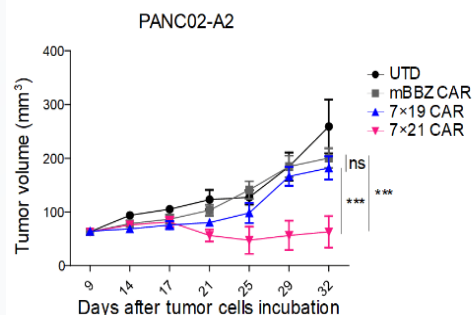
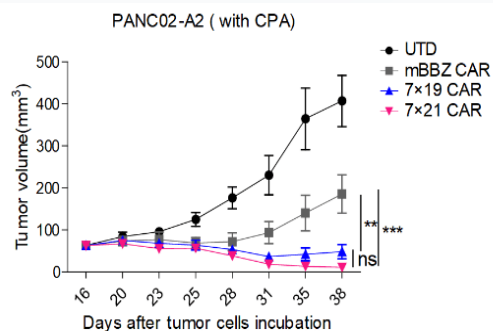
CycloCAR[®] (CYtokine (IL7) and Chemokine (CCL21) LOaded CAR) enables the CAR T cells to co-express IL7 and CCL21



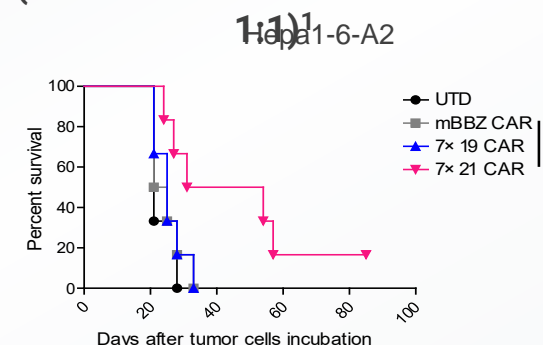
Advantages of CycloCAR[®] (7×21) technology:

- Increased accumulation of T cells and DC cells in tumor tissue
- Could efficiently suppress tumors with heterogeneous target expression
- Potentially lymphodepletion free

7X21 CAR T showed better antitumor activities in pancreatic cancer model with and without cyclophosphamide precondition¹



7x21 CAR T could suppress tumor xenografts with heterogenous target expression (CLDN18.2+ and CLDN18.2- tumor cells mixed at 1:1)

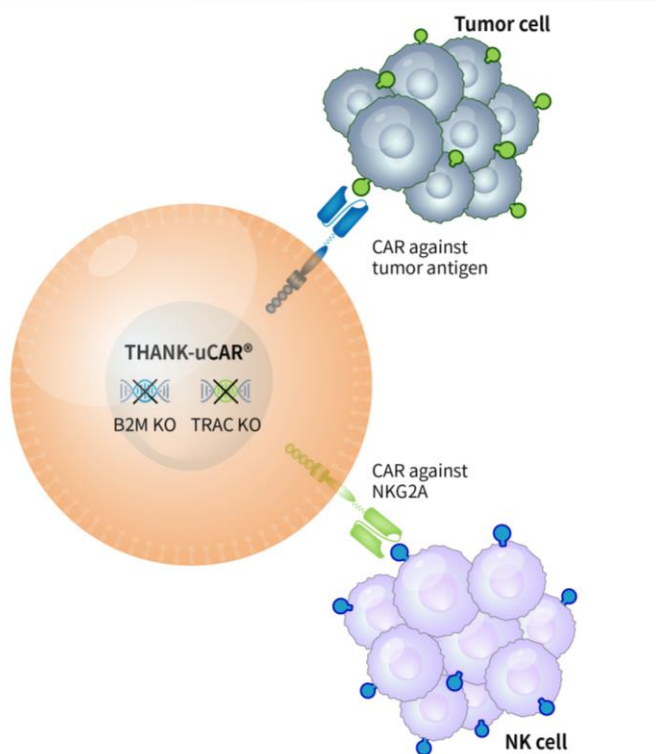


1. Luo H, et. al. *Clinical Cancer Research*. 2020 Oct 15;26(20):5494-5505

THANK-uCAR®: Market-Differentiating uCAR T Platform to Address Immune Evasion



Target and Hinder the Attack of NK cells on Universal CAR T cells (THANK-uCAR®)



Allogeneic universal CAR (uCAR) T cells must evade rejection by the host immune system, or HvGR

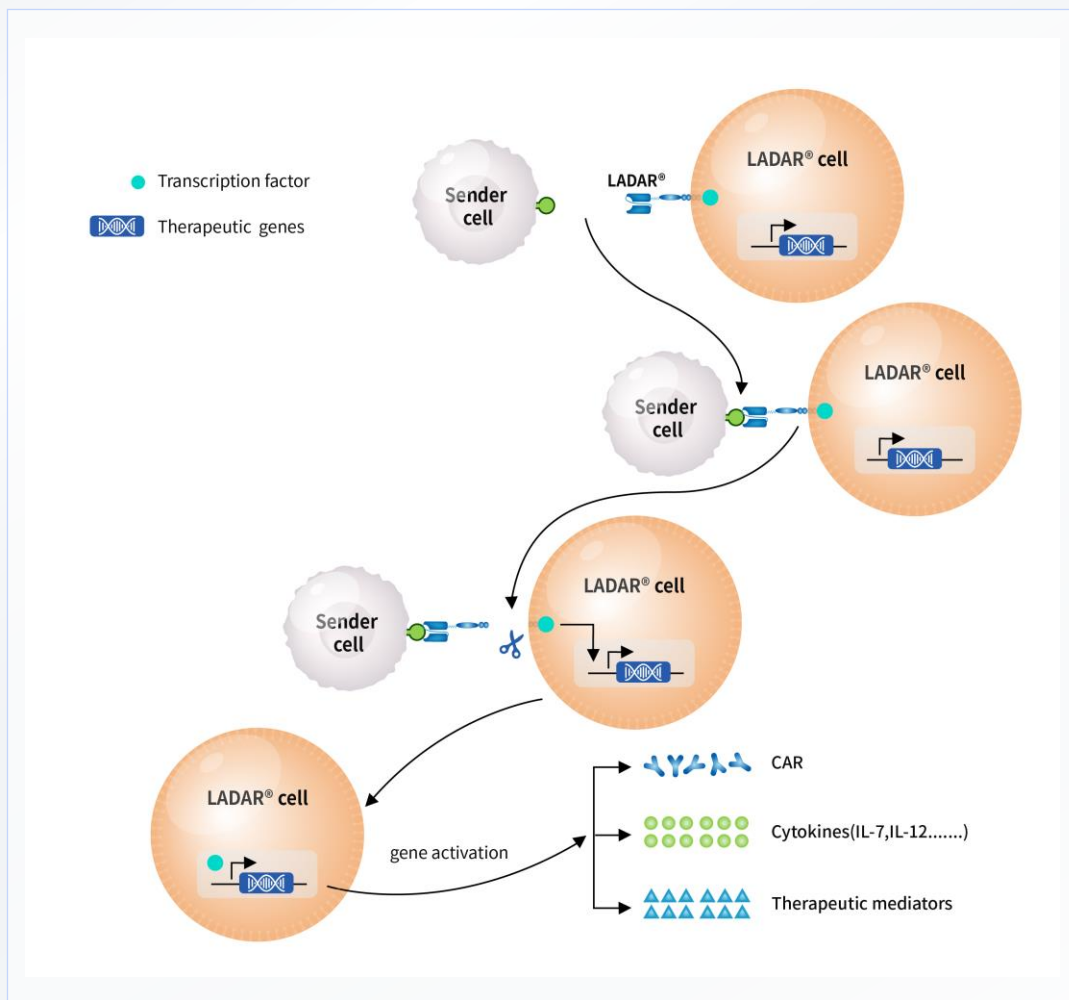
- B2M knockout to overcome HvGR from host T cells, but NK cells attack uCAR T cells without B2M

THANK-uCAR® to better address HvGR

- Anti-NKG2A CAR protects the uCAR T cells from NK cell lysis
- NK cells could act as “feeder cells” for uCAR T cells, thereby enhancing the expansion of uCAR T cells

HvGR: host versus graft reaction
GvHD: graft versus host disease

LADAR®: A Powerful Technology for Precise Targeting



LADAR®: Local Action Driven by Artificial Receptor

LADAR® is an artificial receptor that only induces the therapeutic protein expression in the presence of the LADAR ligand, leading to local antitumor activity, thereby:

- Significantly reducing the risk of side effects, such as on-target off-tumor toxicities
- Potentially making more targets available for cell therapies

Advantages over SynNotch^{1,2}:

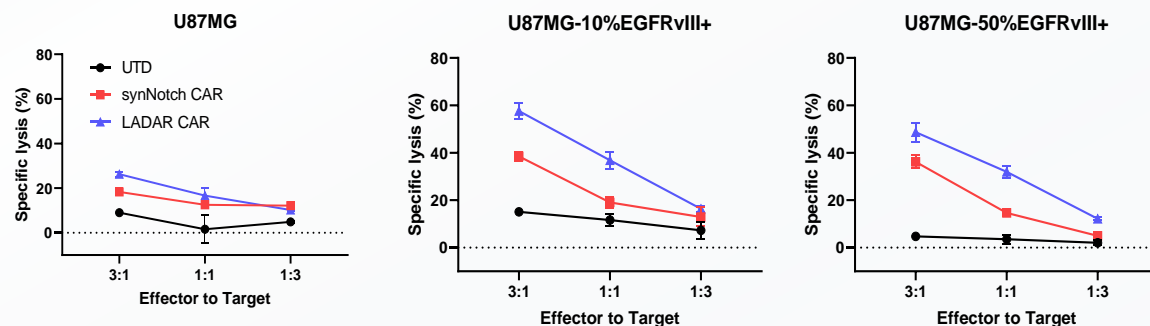
- LADAR® is smaller than SynNotch (sparing additional room for >200 amino acids)
- Significantly higher sensitivity to low-level sender antigen expression

1. Morsut L, et. al. *Cell*. 2016 Feb 11;164(4):780-91

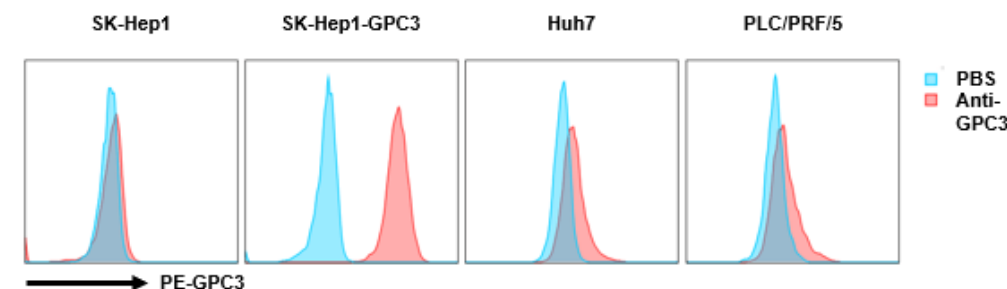
2. Roybal KT, et. al. *Cell*. 2016 Oct 6;167(2):419-432

LADAR®: A Powerful Technology to Address On-target Off-tumor Toxicity, or Systemic Toxicity of Therapeutic Proteins

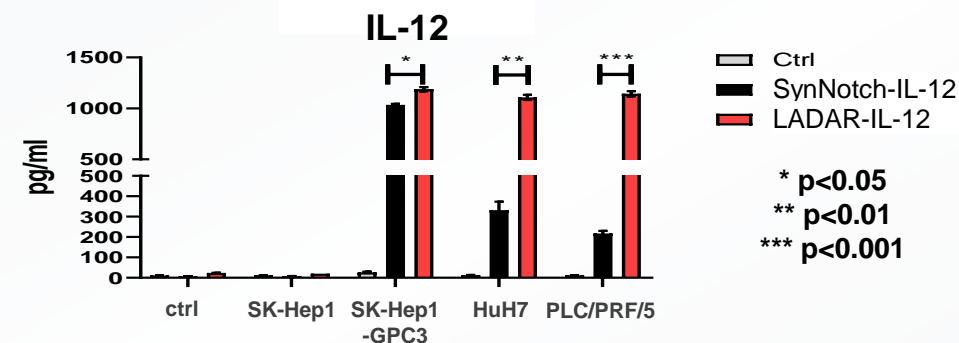
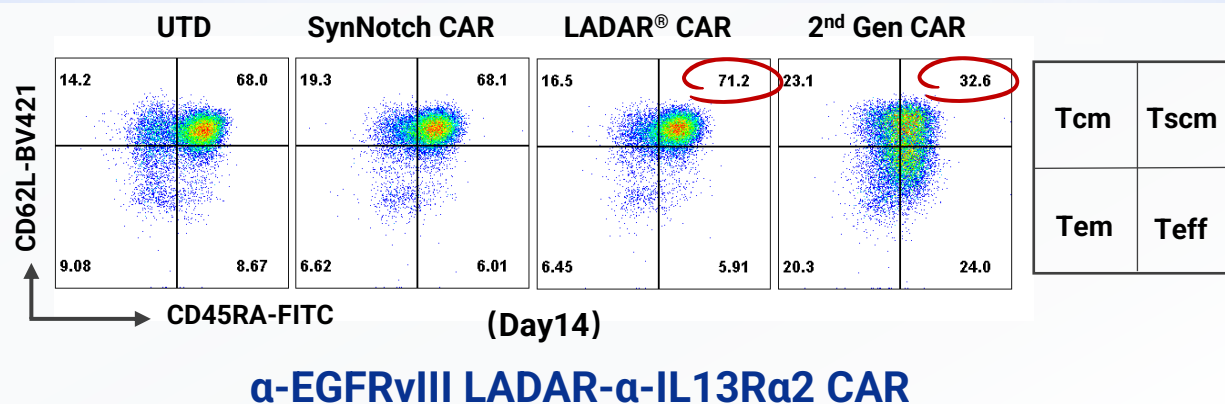
Stronger cytotoxicity than SynNotch



Higher sensitivity to low level of antigen



High fraction of LADAR® T cells remain as stem memory T cells



LADAR® T cells induced IL-12 expression 4-6-fold the level produced by SynNotch T cells in the presence of low-level GPC3 expression

External Partnerships



Commercialization Collaboration

- **Partner** Huadong Medicine (SZ: 000963)
- **Product** Zevor-cel (BCMA CAR T)
- **Territory** Mainland China
- **Rights** Exclusive commercialization
- **Upfront payment** RMB200 million
- **Regulatory and commercial milestone payments** up to RMB1,025 million
- **CARsgen will continue to be responsible for the development, regulatory approval, and manufacturing of CT053 in mainland China.**

Clinical Collaboration

- **Partner** F. Hoffmann-La Roche Ltd
- **Product** AB011 (Claudin18.2 mAb)
- **Study population** 1L GC/GEJ
- **Treatment arm** includes:
 - AB011 in combination with atezolizumab, capecitabine and oxaliplatin
 - Comparison cohorts
- **CLDN18.2 test**
 - CARsgen proprietary CLDN18.2 IHC test kit
- **Both companies co-share the costs of the AB011 treatment arms**

License Agreement

- **Licensee** HK Inno.N (KOSDAQ: 195940)
- **Products**
CT032 (CD19 CAR T)
CT053 (BCMA CAR T)
- **Territory** the Republic of Korea
- **Milestone payments** USD50 million
- **Royalties** up to double digit percentage on net sales

Continue to establish additional external partnerships with leading research institutes and pharmaceutical companies on technology and product licenses



Making Cancer Curable