



### **Forward Looking Statements**

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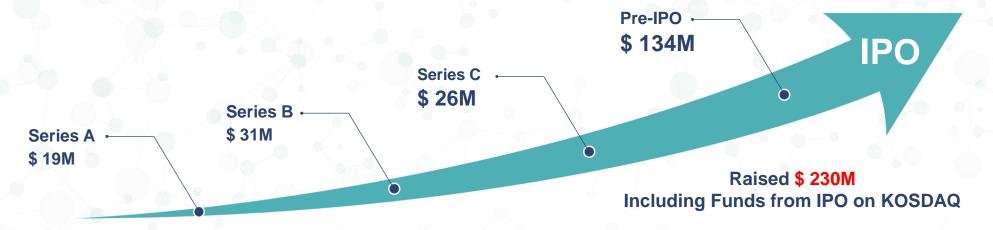
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#### Key milestones achieved





#### 2017~2021

Jul 2017 Founded

May 2018 Strategic Partnership with Samsung Biologics

Nov 2019 L/O GI-101 to Simcere, China for \$ 790M in Greater China Region

Jul 2020 L/O GI-301 to Yuhan, Korea for \$ 1.2B Excluding Japan (Sublicensing, 50/50 Profit Sharing)

Jul 2020 Collaboration with MSD for GI101·Keytruda®

Jun 2021 GI-101 Ph I/II IND (US, KR)

Jul 2021 GI-301 Ph I IND (KR)

#### 2022~2023

May 2022 GI-101 Ph I/II Granted \$ 5.8M from Korea Drug Development Fund (KDDF)

Sep 2022 GI-108 Granted \$ 1.7M from KDDF

Oct 2022 GI-101 Orphan Drug Designation for MCC (US FDA)

Feb 2023 GI-102 Ph I/II IND (US/KR)

Mar 2023 IPO on the KOSDAQ

Oct 2023 L/O GI-301 to Maruho, Japan for \$221M in Japan

#### 2024~

Jun 2024 GI-102 Orphan Drug Designation for sarcoma (US FDA)

Aug 2024 Collaboration with MSD for GI102·Keytruda®

Nov 2024 GI-102 Ph II Granted \$ 5.8M from Korea Drug Development Fund (KDDF)

Nov 2024 GI-128 Granted \$ 0.67M from KDDF

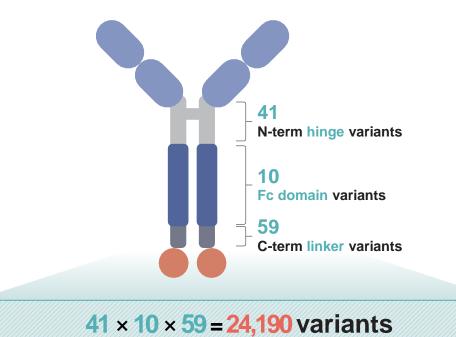
\*Partial support from KDDF

## Integrated GI-SMART<sup>TM</sup> platform for the accelerated screening of bispecific proteins

Expedited identification of optimal candidate molecules through high-throughput screening system

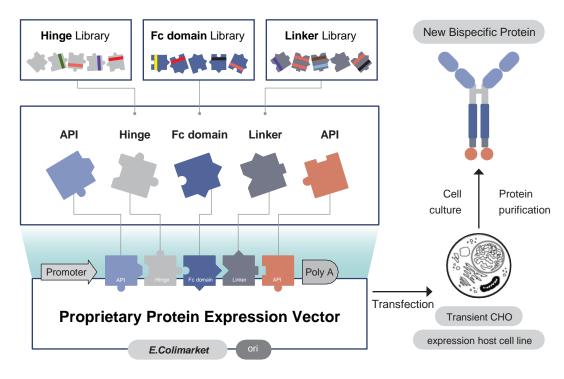
#### SMART-Selex™

Libraries for specific of bispecific proteins
Enable quick assembly of stable and functional proteins

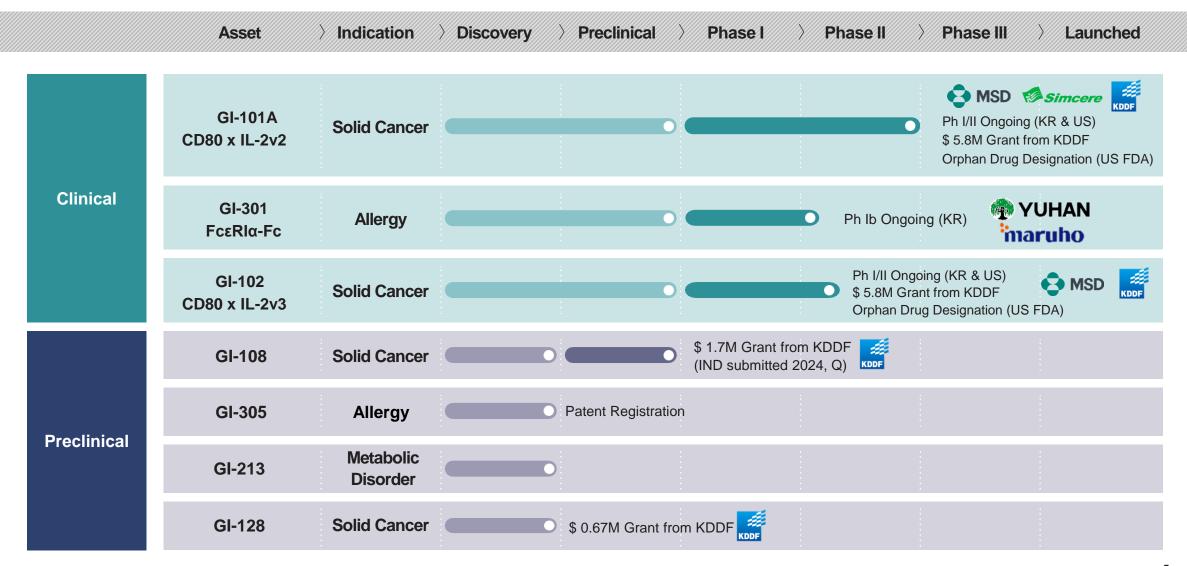


#### SMART-cLego™

Fast cloning by Lego-like block integration into an Expression vector to save cost and time of protein production



#### **Pipeline**



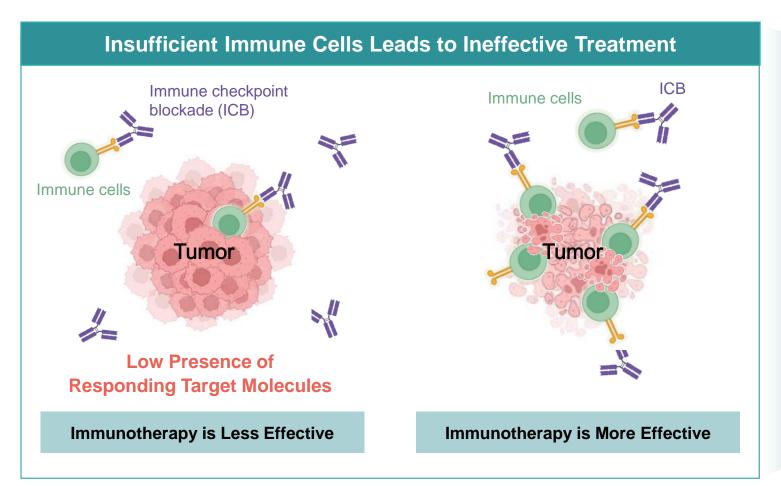


## Immunocytokine 'GI-101A & GI-102'





#### Immune cell is essential for immunotherapy

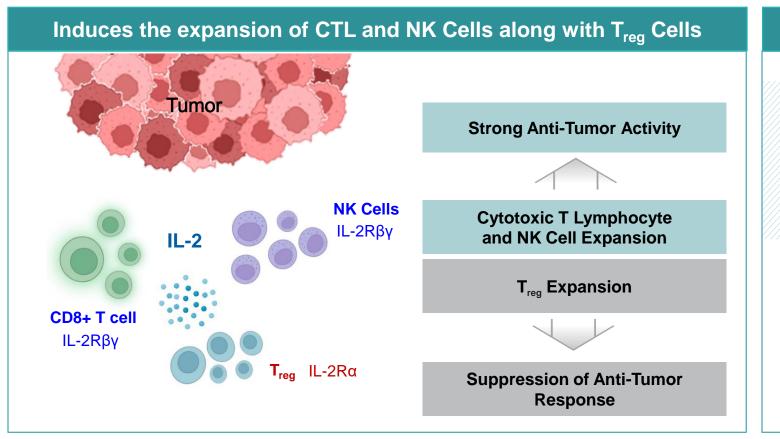


IL-2 increases the number and activity of the immune cells

Source: Dielhl et al., Oncotarget, 2017



#### IL-2 is a validated target, but its clinical use is limited

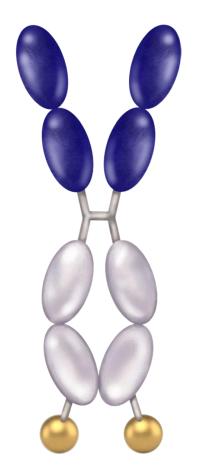






Time (sec)

#### CD80/IL2v is a targeted cytokine: CD80 fused to an IL-2 variant





- Immune cell/tumor targeting
- Inhibits CD80/CTLA-4 interaction, thereby inhibiting Treg function
- Retains CD80 expression on APCs



- Low FcγR/C1q affinity
- No antibody or C-dependent cytotoxicity



- GI-101: 2 amino acid substitution,
   IL-2Rα affinity reduced
- GI-102: 3 amino acid substitution,
   IL-2Rα affinity abolished
- Sustained binding to IL-2βγ receptors compared to wild type IL-2

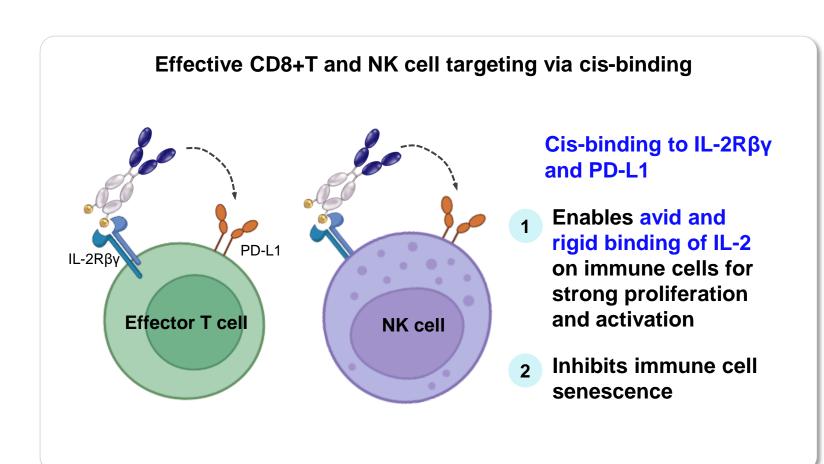
## Binding Affinity to CTLA-4 and PD-L1 CTLA-4 $K_D = 2.9 \text{ nM}$ $K_D = 8.5 \text{ nM}$ $K_D = 8.5 \text{ nM}$

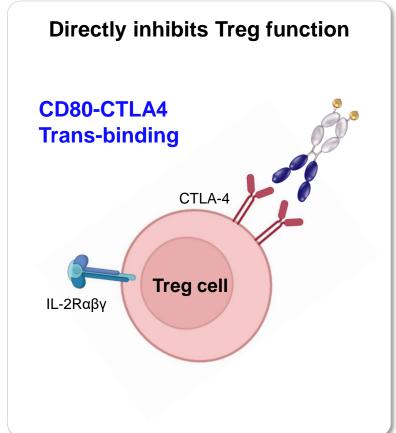
Binding Affinity to IL-2 Receptor (K <sub>D</sub> , nM)						
Receptor	Proleukin <sup>®</sup> (IL-2 wild type)	NKTR-214 (2-PEG-IL2)	GI-101 (CD80 x IL-2v2)	GI-102 (CD80 x IL-2v3)		
IL-2Rα	49.6 (x42)	486.6 (x8)	1830 (x1.3)	No binding		
IL-2Rβ	2080	3951.8	1360	1340		
IL-2Rαβγ	0.003*	-	0.006	0.127		
IL-2Rβγ	0.102*	-	0.11	0.095		
IL-2Rβγ/ IL-2Rαβγ	34	-	18.3	0.75		

Time (sec)



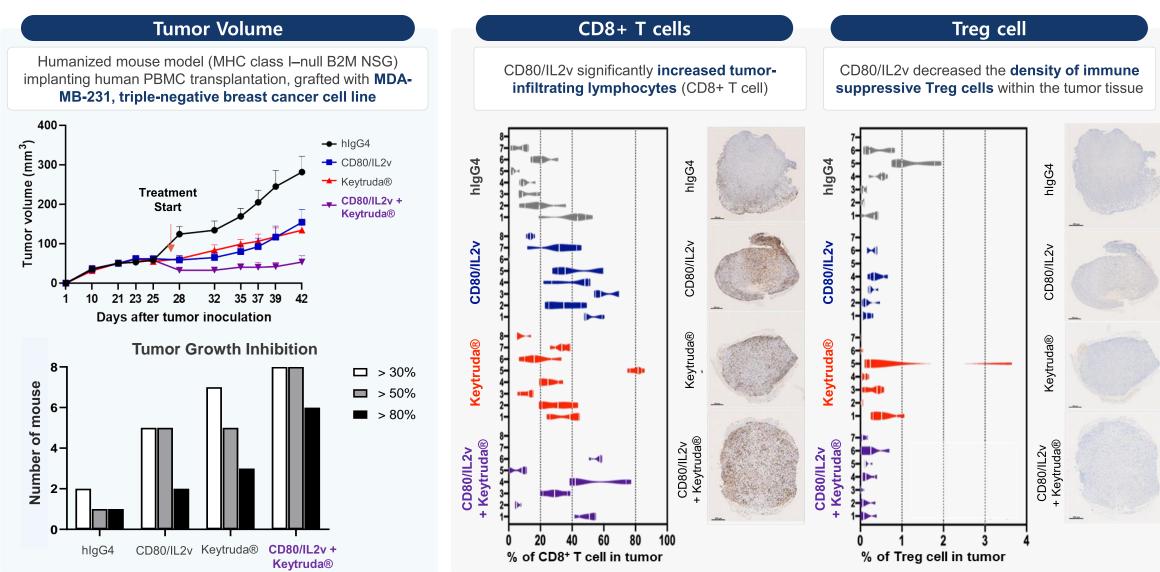
#### CD80/IL2v targets CD8+T and NK cells, while blocking Tregs





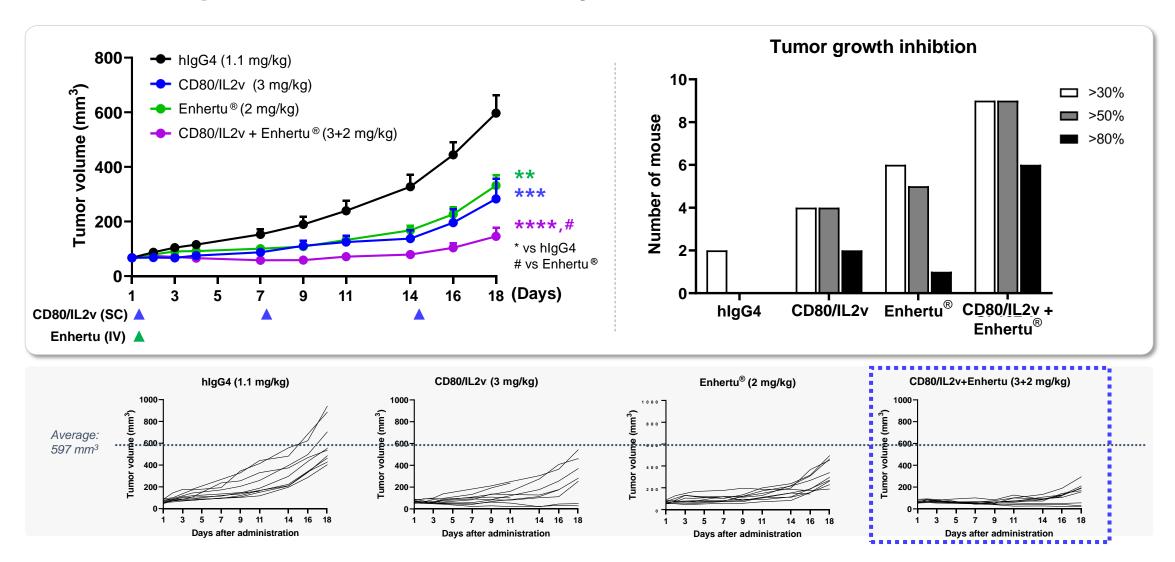


#### CD80/IL2v has synergistic anti-tumor efficacy in humanized mice





#### CD80/IL2v potentiates ADC efficacy in a murine breast cancer model





#### CD80/IL2v is superior to competitors: reversing Treg suppression is key

	<b>I</b> nnovation	Roche	sanofi	Innovent	AsherBio
	GI-101A/GI-102 <sup>1)</sup>	RG6279 <sup>2)</sup>	SAR444245 <sup>3)</sup>	IBI363 <sup>4)</sup>	AB248 <sup>5)</sup>
CD8+ T & NK Cell Proliferation					
Treg Suppression					
Localization to TME, dLN and spleen					
Improved PK Profile			Unknown		Unknown
Synergy with Other Treatment Modalities			Unknown		Unknown

<sup>1)</sup> GI Innovation presentation, Lee et al., ASCO 2024, 2) Bai et al., ASCO 2024, 3) Buchbinder et al., AACR 2023, 4) Bai et al., ASCO 2024,, 5) Buchbinder et al., AACR 202



#### **GI-101A Clinical results**





#### cPR in pancreatic adenocarcinoma with liver metastasis



71 years old female
Pancreatic adenocarcinoma
First diagnosis: 20 Jul 2023
MSS in liquid biopsy
Target lesion: Pancreas, liver

GI-101A 0.05 mg/kg + Pembrolizumab

Treatment duration: 184 days+

Cycle 7 ongoing

#### **Treatment history**

1L

2L

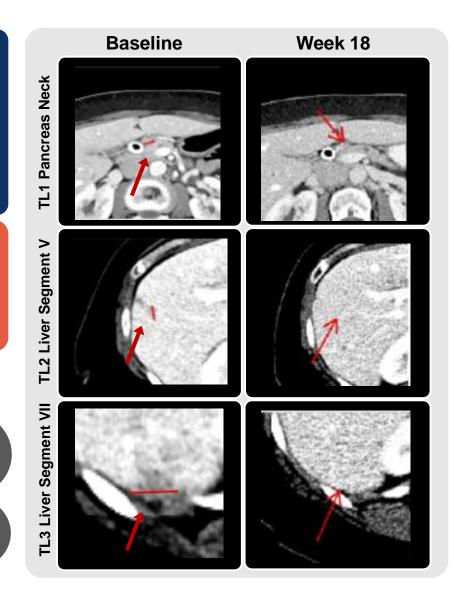
FU Oxaliplatin Irinotecan

Gemcitabine Abraxane DoT: 71 days

**BoR: PD** 

DoT: 56 days

BoR: PD



Week 6:
-72.7% Reduction
Partial Response (PR)

Week 12: -72.7% Reduction Confirmed PR

Week 18:
-86.3% Reduction
Confirmed PR

<u>Duration of</u> response 86 days+

Data cut-off: 2024-11-05 (Preliminary results)



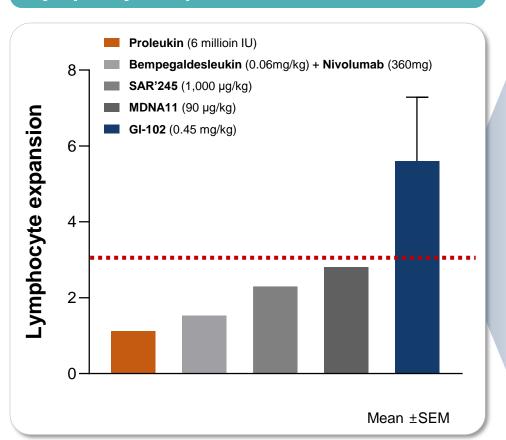
#### **GI-102 Clinical results**



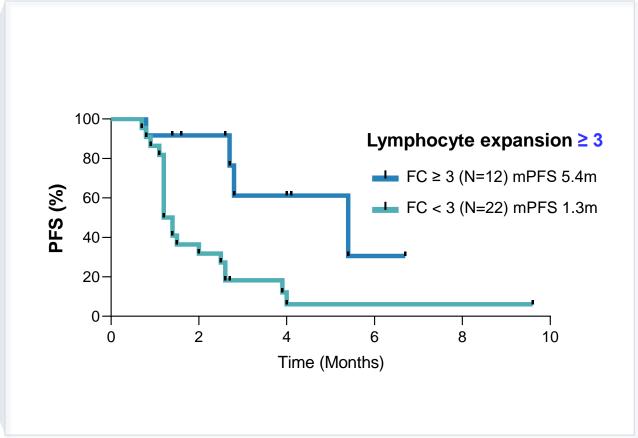


#### GI-102 induced significant expansion of lymphocytes in human

#### **Lymphocyte expansion after IL-2 treatment**



GI-102



<sup>1)</sup> Lissoni P, Oncology, 1994; 2) Diab et al. J Clin Oncol 2023;

<sup>3)</sup> Sanofi R&D Day 2020; 4) Q3 2023 Medicenna Corporate Overview

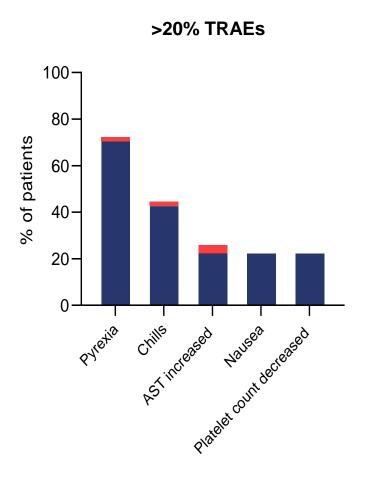


#### GI-102 has demonstrated great safety and tolerability up to 0.45 mg/kg

#### In dose escalation part (0.06-0.45 mg/kg), no DLTs have been observed

# of subjects (%)	GI-102 (N=35)	Proleukin <sup>®</sup> (N=270, historical data)
Patients with TEAEs		
≥ Grade 3 TEAE	22 (40.7%)	257 ( <b>95.0%</b> ) <sup>†</sup>
≥ Grade 4 TEAE	6 (11.1%)	94 ( <b>35.0%</b> ) <sup>†</sup>
AE leading to death	0 (0%)	6 (2.0%) <sup>†</sup>
Common TRAEs (>20%)	Pyrexia, chills, nausea, AST increased	Hypotension, vomiting, diarrhea, bilirubinemia, oliguria, fever/chill, thrombocytopenia, SGOT increased, creatinine increased, malaise, rash, dyspnea, confusion, anemia, nausea, leukopenia

 All Grade 4 TRAEs were transient lymphopenia, thought to be related to lymphocyte migration to lymphoid organs

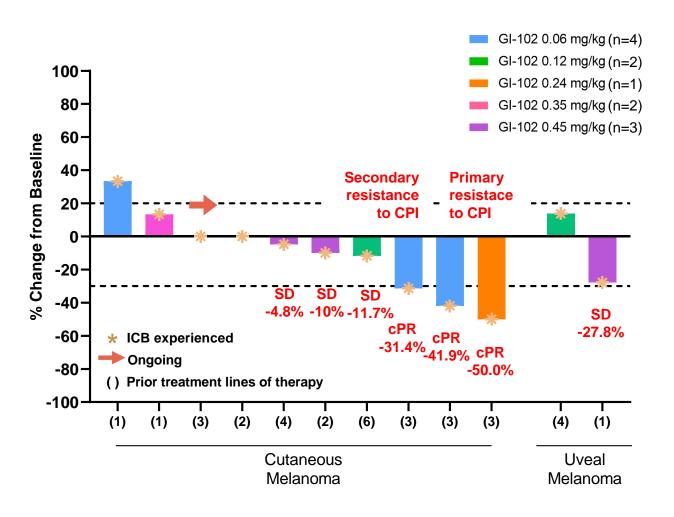


<sup>†</sup> Proleukin® Medical Reviewers Report BLA Supplement 97-0501; Not a head-to-head comparison



#### GI-102 shows strong monotherapy activity

#### Metastatic, heavily pretreated melanoma (N=12)



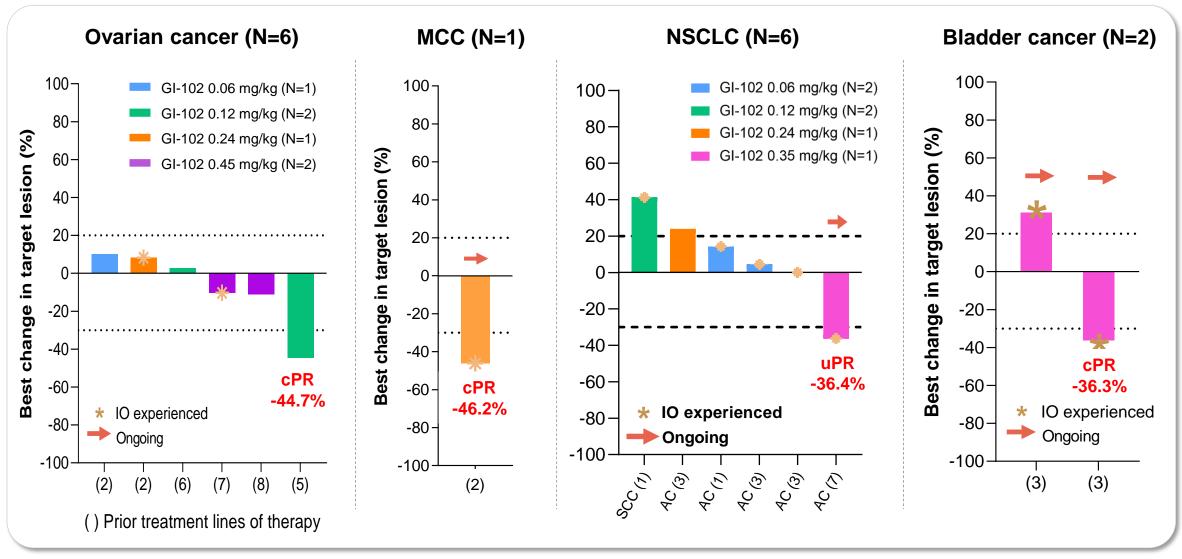
#### Clinical results in CPI refractory metastatic melanoma

Treatment regimen	Response rate (Responder/Total)		
Pembrolizumab + lenvatinib (LEAP-004; MSD) 1)	<b>21.4%</b> (22/103)		
Nivolumab + relatlimab, 1 prior CPI therapy (RELATIVITY-020; BMS) <sup>2)</sup>	<b>12.0%</b> (42/351)		
Nivolumab + relatlimab, ≥ 1 prior CPI therapy (RELATIVITY-020; BMS) <sup>2)</sup>	<b>9.2%</b> (15/163)		
Nemvaleukin (Alkermes) 3)	9.1% (4/44)		
SAR444245 (Sanofi) 4)	<b>0%</b> (0/12)		
Bempegaldesleukin (Nektar; BMS) <sup>5)</sup>	<b>0%</b> (0/7)		
GI-102 (GI Innovation)	30% (3/10)		

<sup>1)</sup> Arence et al., J Clin Oncol 2023; 2) Ascierto et al., J Clin Oncol 2023; 3) ASCO 2022 Abstract 2500; 4) ESMO 2022 747P; 5) Bentebibel et al., Cancer Discov 2019

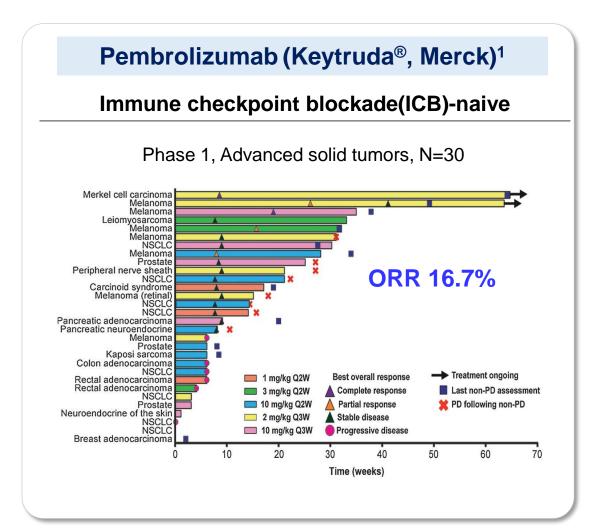


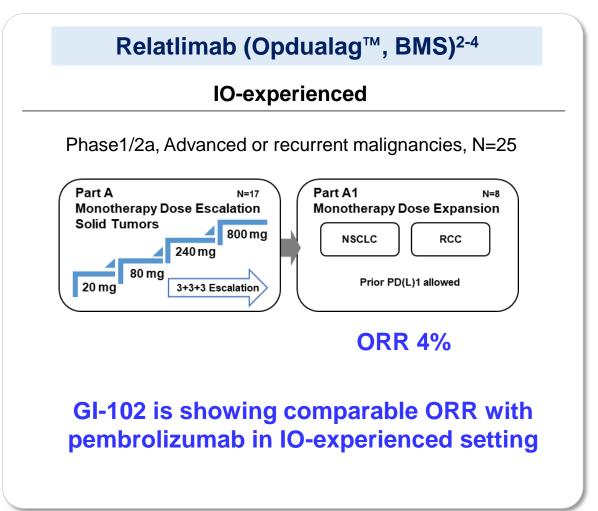
#### Objective responses in diverse indications





#### Historical early phase ORR results with immunotherapy agents







#### GI-102 for cell therapy





#### IL-2 can be combined with different treatment modalities for cancer

#### The first tumor-derived autologous T cell immunotherapy approved by FDA

#### FDA grants accelerated approval to lifileucel for unresectable or metastatic melanoma

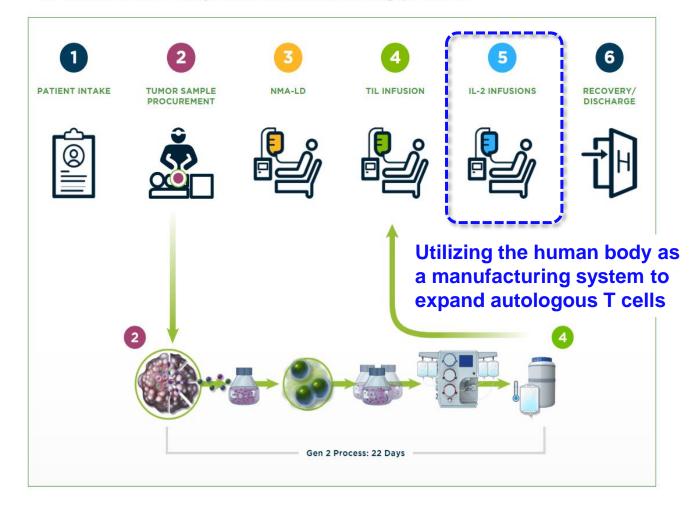
On February 16, 2024, the Food and Drug Administration granted accelerated approval to lifileucel (Amtagvi, Iovance Biotherapeutics, Inc.), a tumor-derived autologous T cell immunotherapy, for adult patients with unresectable or metastatic melanoma previously treated with a PD-1 blocking antibody, and if BRAF V600 positive, a BRAF inhibitor with or without a MEK inhibitor.

ORR 31.4%

Full prescribing information for Amtagvi will be posted <a href="here">here (/vaccines-blood-biologics/development-approval-process-cber/2024-biological-license-application-approvals</a>).

Safety and efficacy were evaluated in a global, multicenter, multicohort, open-label, single-arm trial in patients with unresectable or metastatic melanoma who had previously been treated with at least one systemic therapy, including a PD-1 blocking antibody, and if BRAF V600 mutation-positive, a BRAF inhibitor with or without a MEK inhibitor. Among 89 patients who received lifileucel, two patients were excluded because the product did not meet specification and five patients were excluded due to product comparability. Lifileucel was administered following a lymphodepleting regimen consisting of cyclophosphamide 60 mg/kg daily with mesna for 2 days followed by fludarabine 25 mg/m2 daily for 5 days. Three to 24 hours after infusion, patients received IL-2 (aldesleukin) at 600,000 IU/kg every 8 to 12 hours for up to 6 doses in order to support cell expansion in vivo. The median administered lifileucel dose was 21.1× 109 viable cells. The median number of administered IL-2 (aldesleukin) doses was 6.

#### Streamlined 22-day GMP manufacturing process





#### Safety of lifileucel and Proleukin® is highly problematic

# Grade 3/4 Hematologic Lab Abnormalities\* Preferred Term, n (%) Grade 3/4 Leukopenia 156 (100.0) Lymphopenia 156 (100.0) Neutropenia 156 (100.0) Thrombocytopenia 147 (94.2) Anemia 111 (71.2)

#### Non-Hematologic TEAEs in ≥30% of Patients\*†

Preferred Term, n (%)	Any Grade	Grade 3/4
Chills	117 (75.0)	8 (5.1)
Pyrexia	81 (51.9)	17 (10.9)
Febrile neutropenia	65 (41.7)	65 (41.7)
Hypophosphatemia	58 (37.2)	41 (26.3)
Hypotension	52 (33.3)	17 (10.9)
Fatigue	51 (32.7)	6 (3.8)
Diarrhea	48 (30.8)	2 (1.3)

## WARNING: TREATMENT-RELATED MORTALITY, PROLONGED SEVERE CYTOPENIA, SEVERE INFECTION, CARDIOPULMONARY and RENAL IMPAIRMENT

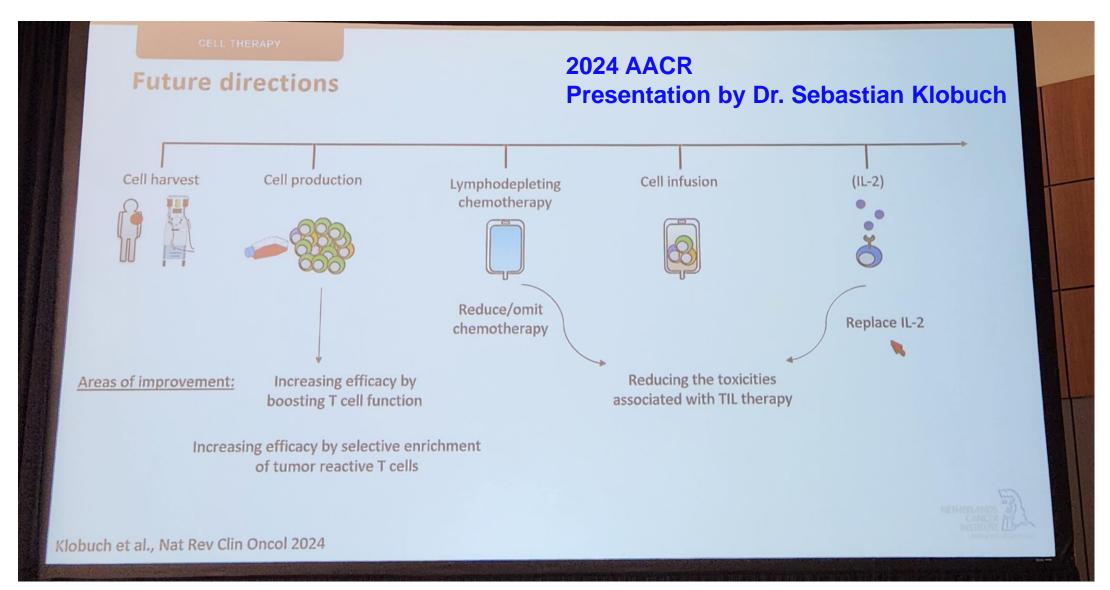
See full prescribing information for complete boxed warning.

- Monitor patients for prolonged severe cytopenia and monitor for internal organ hemorrhage (5.1, 5.2, 5.3)
- Treat severe infections (5.1, 5.4)
- Monitor cardiopulmonary and renal functions throughout the treatment course (5.1, 5.5, 5.6, 5.7)

Administer in an inpatient hospital setting. An intensive care facility and specialists skilled in cardiopulmonary or intensive care medicine must be available (2.1, 6.1)

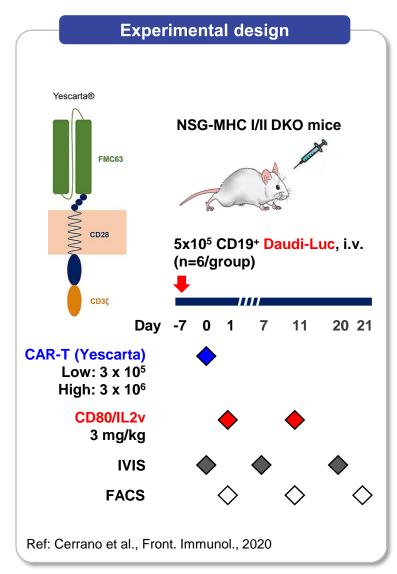


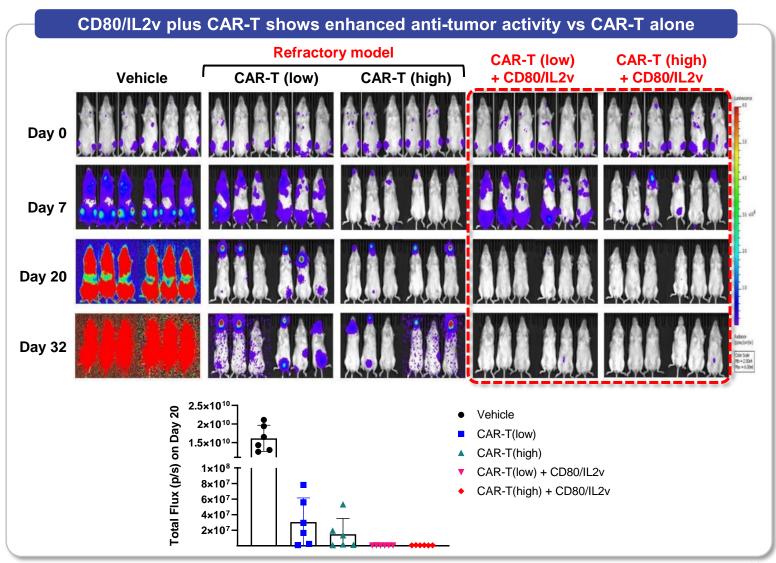
#### TILs and CAR-T for solid tumors require a safer IL-2 option





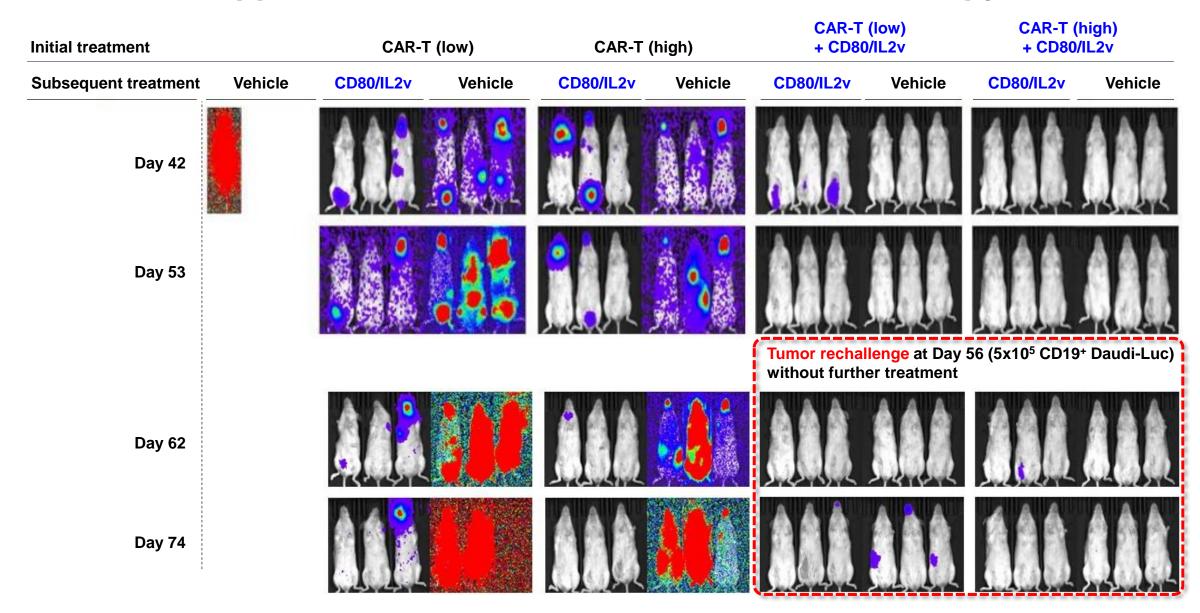
#### CD80/IL2v plus CAR-T therapy causes complete tumor rejection in mice







#### CD80/IL2v suppresses tumor recurrence after CAR-T therapy





#### CD80/IL2v can maximize efficacy CAR-T therapy

Initial treatment		CAR-T	(low)	CAR-T (	(high)	CAR-T + CD80		CAR-T (I + CD80/		
Subsequent treatment	Vehicle	CD80/IL2v	Vehicle	CD80/IL2v	Vehicle	CD80/IL2v	Vehicle	CD80/IL2v	Vehicle	
						Tumor rechal and no furthe		56 (5x10⁵ CD19 <sup>.</sup> since Day 56	† Daudi-Luc)	
Day 84										Luninesomo
Day 94							<b>6</b>			40
Day 104										20



#### CD80/IL2v as a CAR-T consolidation therapy





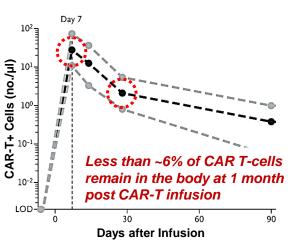
Dr. Dok Hyun Yoon

Global KOL

CAR-T Center

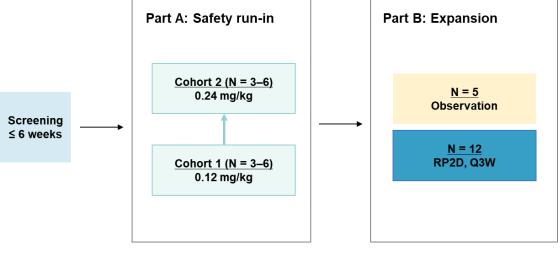
Director

#### **CAR-T** cell level post treatment



- 1. Restoration of CAR T expansion
- 2. To produce better quality CAR T cells to maximize its efficacy

### Patients with R/R DLBCL who received CAR-T therapy (N≤29)



Primary objective:
CAR-T re-expansion level
Secondary objectives:
Safety
Efficacy

Neelapu et al, NEJM 2017 • 29



#### **Key opportunities for GI-101A/GI-102**



CAR-T Consolidation

\$19B

CAR T therapy Market size in 2030 Enhertu<sup>®</sup>
Combination

\$14B

Enhertu<sup>®</sup>
CAGR +25.7% ▲
(2023-2030)

Keytruda<sup>®</sup>
Combination

\$16B

Keytruda® Market size in 2030 Proleukin® Substitute

\$200M

Proleukin® CAGR +31.9% ▲ (2023-2030)

Predictive market size data from EvaluatePharma

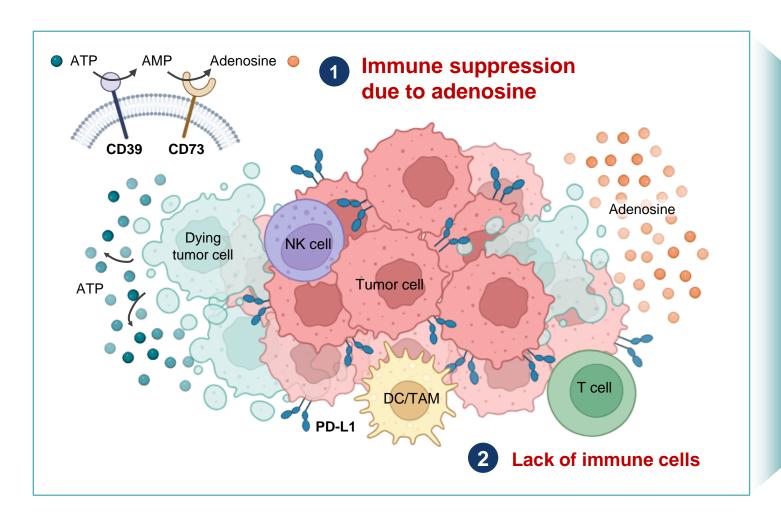


## Novel bispecific targeting cancer metabolism, 'GI-108'





## Targeting tumor metabolism is essential to overcome immunosuppressive tumor microenvironment



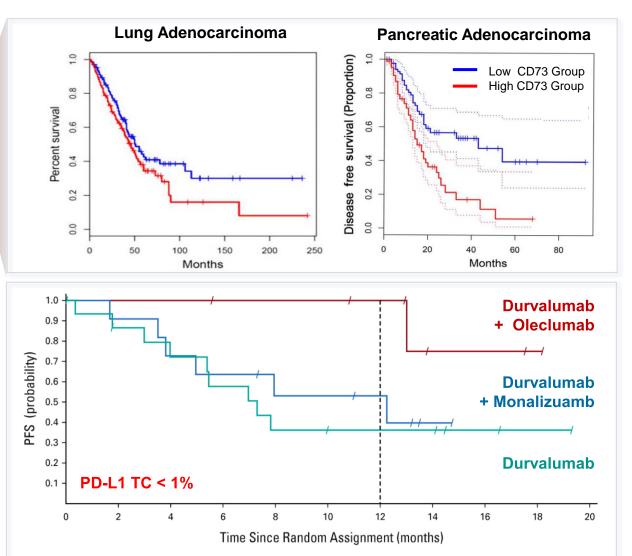
Strategies to overcome adenosine-mediated immune suppression is essential



#### CD73 is a validated target in various cancers

	Target relevance		
Tumor Type	CD73 (NT5E) <sup>1</sup>	Prognosis	
Lung Adenocarcinoma	++++		
Pancreatic Adenocarcinoma	+++		
Thyroid Carcinoma	++++		
Sarcoma	++++		
Glioblastoma Multifome	++++		
Liver Hepatocellular Carcinoma	++++		
Colon Adenocarcinoma	++++		
Rectum Adenocarcinoma	++++		
Stomach Adenocarcinoma	+++		
Brain Lower Grade Glioma	+++		
Esophageal Carcinoma	+++		
Head and Neck Squamous Cell Carcinoma	+++		
Renal Clear Cell Carcinoma	+++		







#### Our approach overcomes the limitation of anti-CD73 antibody

Overcoming adenosine-induced immune suppression







Oleclumab
Durva+Ole:
30%ORR
in NSCLC

Uliledlimab
Uli+Tori:
31%ORR
in NSCLC

Quemliclustat
Quem+chemo:
19.4mo mOS
in PDAC

**G**innovation

Dual-targeting via anti-CD73 & IL-2 variant

- Adenosine pathway inhibition via anti-CD73
- TIL expansion with IL-2 variant

Proliferation and activation of immune cells



#### GI-108 has a dual-targeting action via anti-CD73 and IL-2 variant





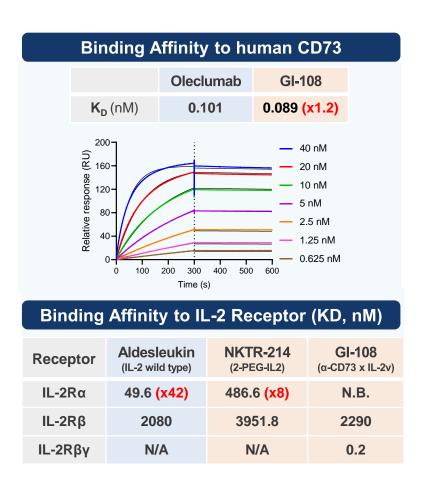
- Targeting of CD73 overexpressing tumor cells
- Inhibits AMP breakdown to adenosine
- Designed to remediates immune system from tumor-mediated immunosuppression



- Low FcγR / C1q Affinity
- No antibody or C-dependent cytotoxicity



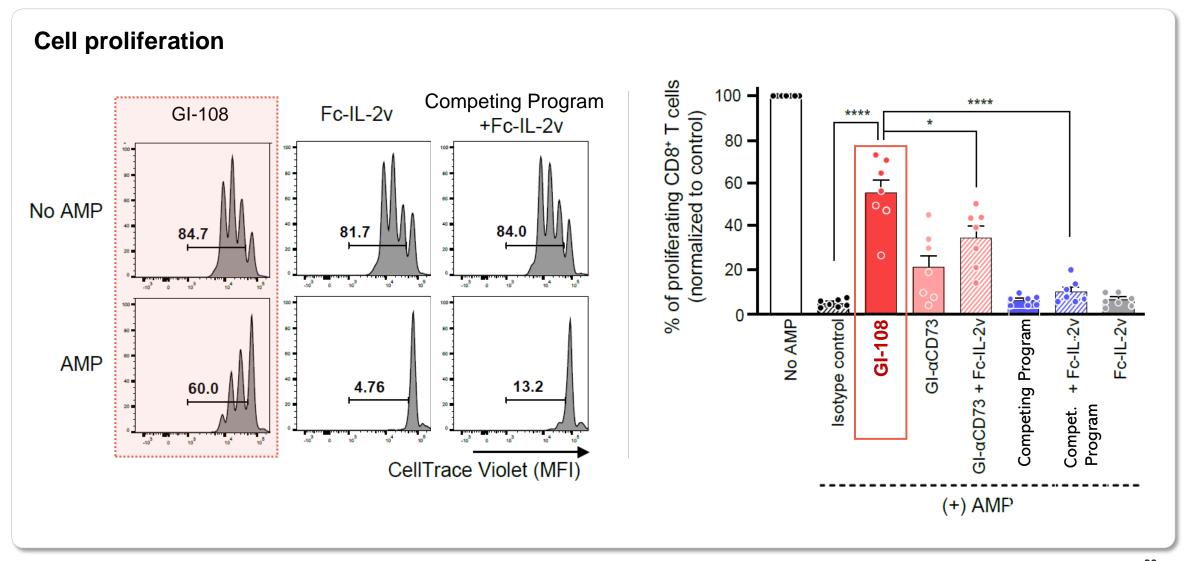
- Substituted 3 amino acids the wildtype IL-2
- Removed the affinity to IL-2Rα chain
- Sustained binding to IL-2 βγ receptors



Source: Stauber et al., PNAS 2006;103:2788-2793, Charyah et al., PLOS ONE 2017;12:e0179431

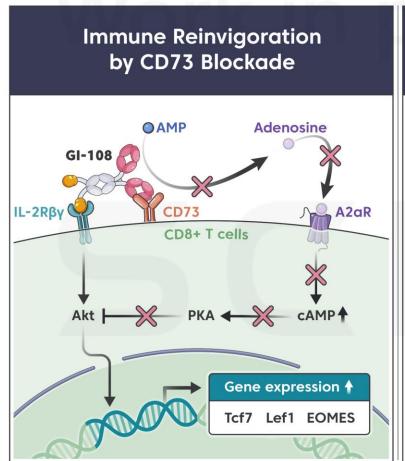


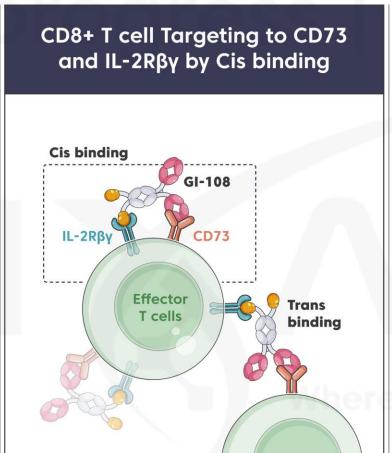
#### GI-108 reinvigorates CD8+ T cells in AMP-rich conditions

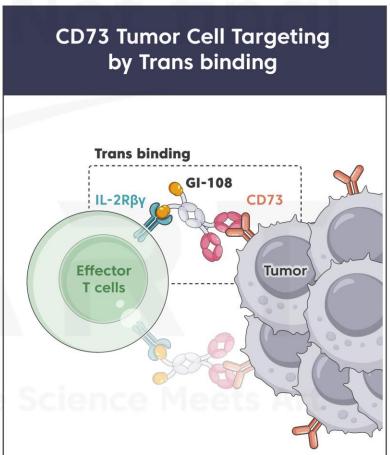




### Key competitive edge of GI-108









### GI-108 has superior profiles compared to other anti-CD73 antibody



	Competing Program A	Competing Program B	Competing Program	GI-108
Description	α-CD73 mAb	α-CD73 mAb	α-CD73 mAb	αCD73/IL2v3
Inhibition of adenosine pathway	V	V	V	V
Tumor targeting	V	V	V	V
Immune cell targeting	v	V	V	V
Proliferation and activation of CD8+ T cells	V	V	V	V
Hook Effect	V	V	-	V



# Next Blockbuster Drug for Allergy, 'GI-301'





### Unmet needs in the allergy market







Manufacturers: Roche/Novartis
 (1st Approval: Asthma in 2003)

• Global Sales: \$ 3.8B in 2022

• Target: IgE

Europe Patent Expiry in 2024 US Patent Expiry in 2025



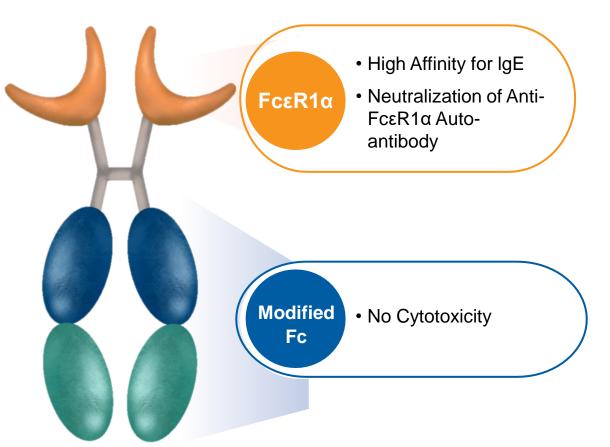
### **Unmet Needs**

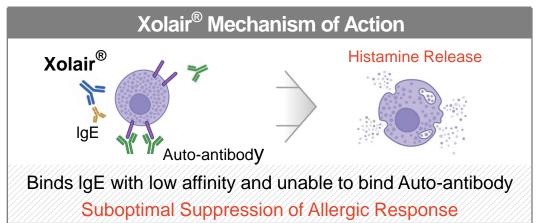
- Ineffective in Patients with High IgE Level (>700 IU/mL)
- Ineffective in Patients with Auto-antibody
- Risk of Anaphylaxis
- Cannot be Used in Children Under 6

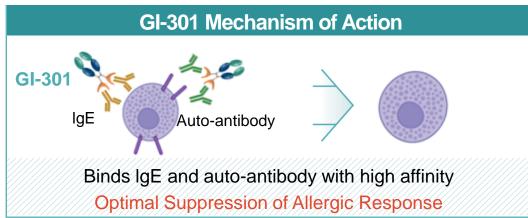
Source: GlobalData, EvaluatePharma (AD, Asthma, Nasal Polyp, Rhinitis, Urticaria, Pruritus, Eosinophilic oesophagitis and Other dermatoses; Sales and Forecasts 2021-2027)



### Novel IgE trap, GI-301 blocks IgE and auto-antibody

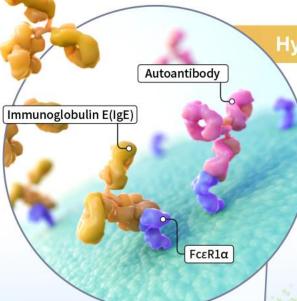






## MoA of GI-301

GI-301 in hypersensitivity reaction



Blood

levels

High

### **Hypersensitivity reaction**

When the immune system is exposed to foreign antigens, immunoglobulin E(IgE) and autoantibody(anti-Fc $\epsilon$ R1 $\alpha$ ) are expressed. These antibodies can bind to Fc $\epsilon$ R1 $\alpha$  of mast cells, activating the cells.

Activated mast cells release histamine, increasing blood histamine levels causing hypersensitivity reaction.

Histamine

Mast cell

#### ECD of FcεR1α

- Structure adapted from FcεR1α

### **Dual action of GI-301**

GI-301 has two functional groups that can each binds to immunoglobulin E(IgE) and autoantibody(anti-FcεR1α) with high affinity, inhibiting the activation of mast cells.

Mast cell deactivation decreases the histamine concentration in the blood, alleviating hypersensitivity reaction.

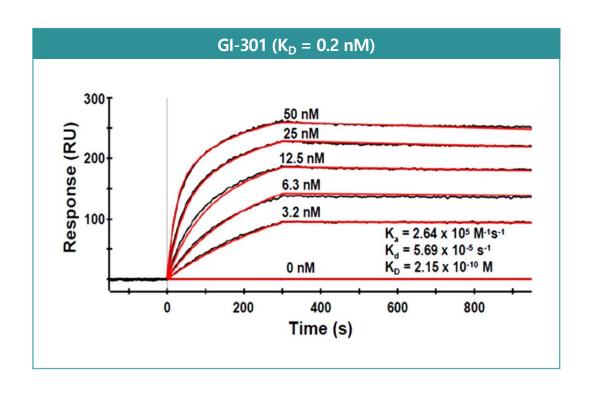
**FcεR1**α

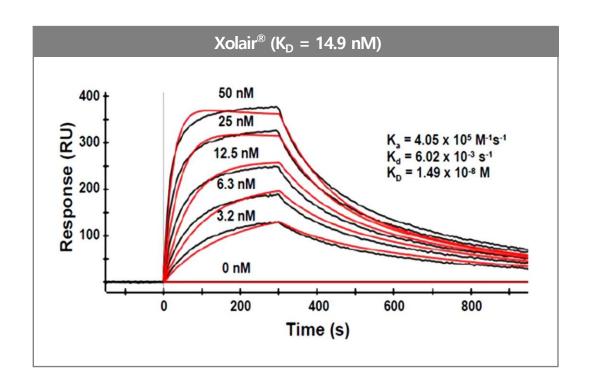
Blood histamine levels

• 42



### GI-301 binds IgE approximately 70 times higher than Xolair®







# **Superior to competitive products**

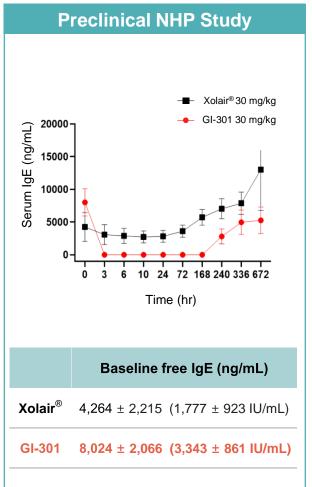
		<b>G</b> innovation	U novartis	U NOVARTIS
Category	Function	<b>GI-301</b> (FcεRlα-Fc)	<b>Xolair<sup>®</sup></b> (anti-IgE antibody)	<b>Ligelizumab</b> (anti-IgE antibody)
Efficacy	IgE Affinity		0	•
	Auto-antibody	● Effective	O Not Supported by MOA	O Not Supported by MOA
Safety	Low Risk of Anaphylaxis		0	0

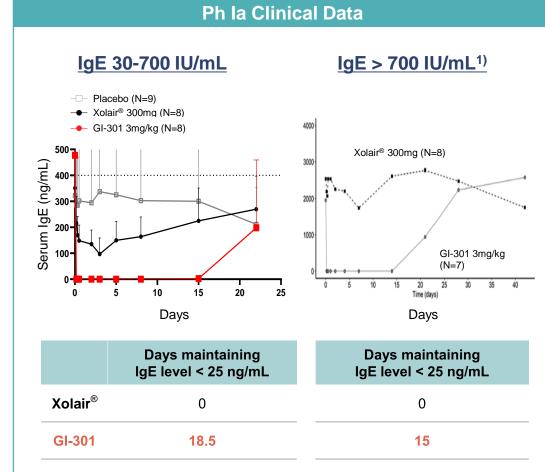
●: High ①: Intermediate ○: Low



### GI-301 better controls IgE level than omalizumab across all dosing range

Greater IgE reduction, longer effectiveness than Xolair® after single dose







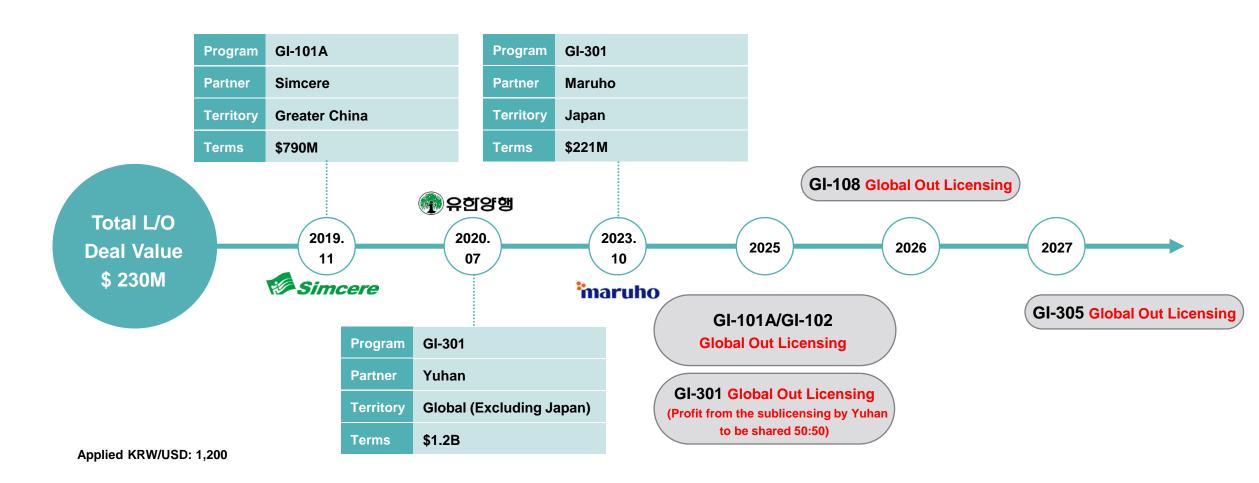


# Marketability





### 4 new deals in the next 4 years and targeting product commercialization





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