LigaChem Biosciences Inc.

Investor Relations 2024

3Q24

Company Overview

LigaChemBio

Leader in novel drug development with world-class researchers, technology, and global experiences

2 TECHNOLOGY PLATFORMS
LIGACHEMISTRY (MEDICINAL CHEMISTRY)
CONJUALL (ADC)

> 3 THERAPEUTIC AREAS
ONCOLOGY (SMALL MOLECULE & ADC)
INFECTIOUS DISEASE
ANTI-FIBROSIS

>28 PROPRIETARY & PARTNERED PIPELINE

7 CLINICAL TRIALS

>15 COLLABORATION PARTNERS

EMPLOYEES
172
(144 in R&D, 48 PhDs)

FOUNDED 2006
IPO 2013

BEST ADC PLATFORM TECHNOLOGY AWARD
(WORLD ADC 2018/2019/2020/2021/2023)

Investment Highlights

LigaChemBio

LCB's "ConjuALL™" – Best Recognized ADC Platform Technology in the Space

- **Winner of the Best Platform Award at the World ADC Summit for 5 Consecutive Years**: Winner (2023, 2021), Runner-up (2018–2020).
- **LCB Stands as the Top Developer** with the largest number, close to **40 ADC assets**, utilizing "ConjuALL,"
- ConjuALL is recognized for its **competitiveness by global ADC experts** as **being validated in clinical trials.**

Multiple Global Licensing Achievements

- **Secured 13 Licensing deals totaling $7.6 billion**, including partnerships with leading global pharmaceutical companies such as **Janssen, Amgen, and Takeda**, achieving cumulative milestones of around $7.6 billion.
- **Further licensing focuses on major pharmaceutical companies**, particularly through **product& package deals.**

Positive Clinical Results validate our ADC platform and raise the value of assets.

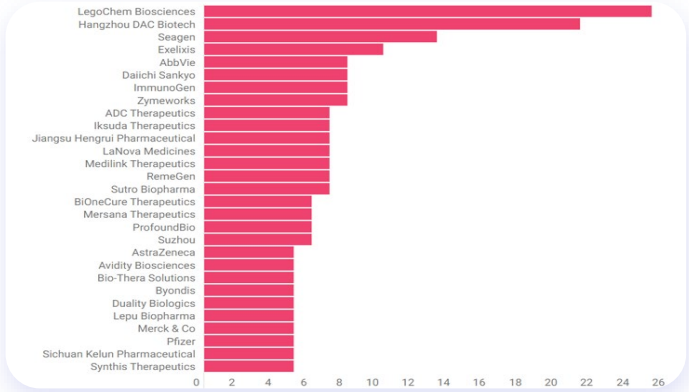
- **Partners: HER2-ADC (Fosun)** in clinical phase 1,2,3 ; **ROR1-ADC (CStone)** in final stage of phase 1a; CD-19 in phase 1(Iksuda).
- **LigaChem: Trop2-ADC phase 1(co-development with Janssen)**, preparing 5 preclinical entries.
- **Goal:** Develop 5+ candidates annually, start at least 1 clinical trial each year, and secure 5-10 proprietary clinical-stage pipelines in 5 years for sustainable high-value creation.

Corporate Standing and Financial Resources

(As of August 2024)

- **Market Cap**: Approximately **$2.6 billion**. (**Ranked 7th** in KOSDAQ)
- **Cash on hand: $450million**
- **Continuous Cash Inflow : Upfront** from newly signed deals, **profit shares** from partner's 3rd party licensing deals, and **milestones & royalties** from existing deals.

Our standing in the ADC industry, 2024



ADCs Coming Of Age: Deals, Targets And Catalysts :: In Vivo (informa.com)

All Compassing Service

Linker	Payload	Expanded Approach
BG-linker	PBD-prodrug	Immunomodulator (AIC, ADIC)
	MMAF	
Flexible DAR	MMAE	Bispecific antibody
	Topo I inhibitor	

01 Best ADC Platform

Awarded the 'Best ADC Platform Technology' for 5 consecutive years at the World ADC Summit. Highly recognized by ADC global industry experts for its novelty and exceptional scientific validation.

*** Winner(1st place): 2023, 2021**

Runner up (2nd place) : 2018- 2020

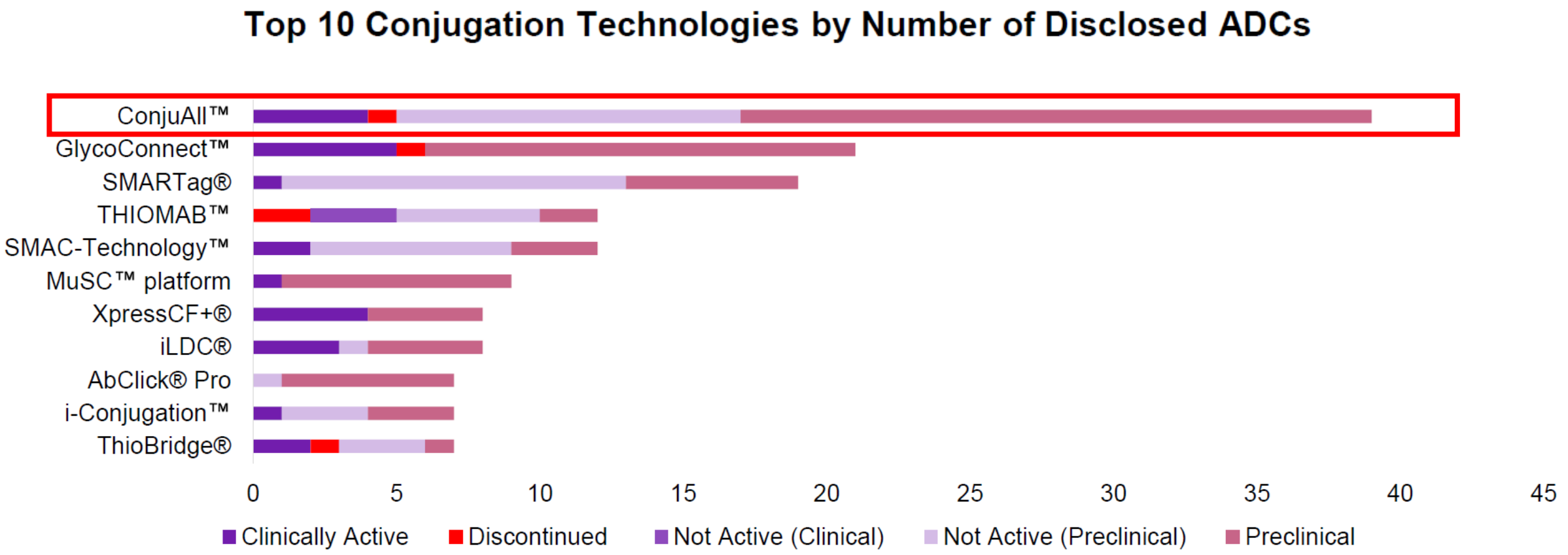
02 Global #1 ADC Developer 2023

The highest number of ADC pipelines, overtaking Seagen and Daiichi Sankyo.
3 assets are secured for registering with clinical programs in 2024-2025.
With an accelerating development pace, we aim to secure 5 candidates annually, and achieve 5 internal clinical programs by 2030.

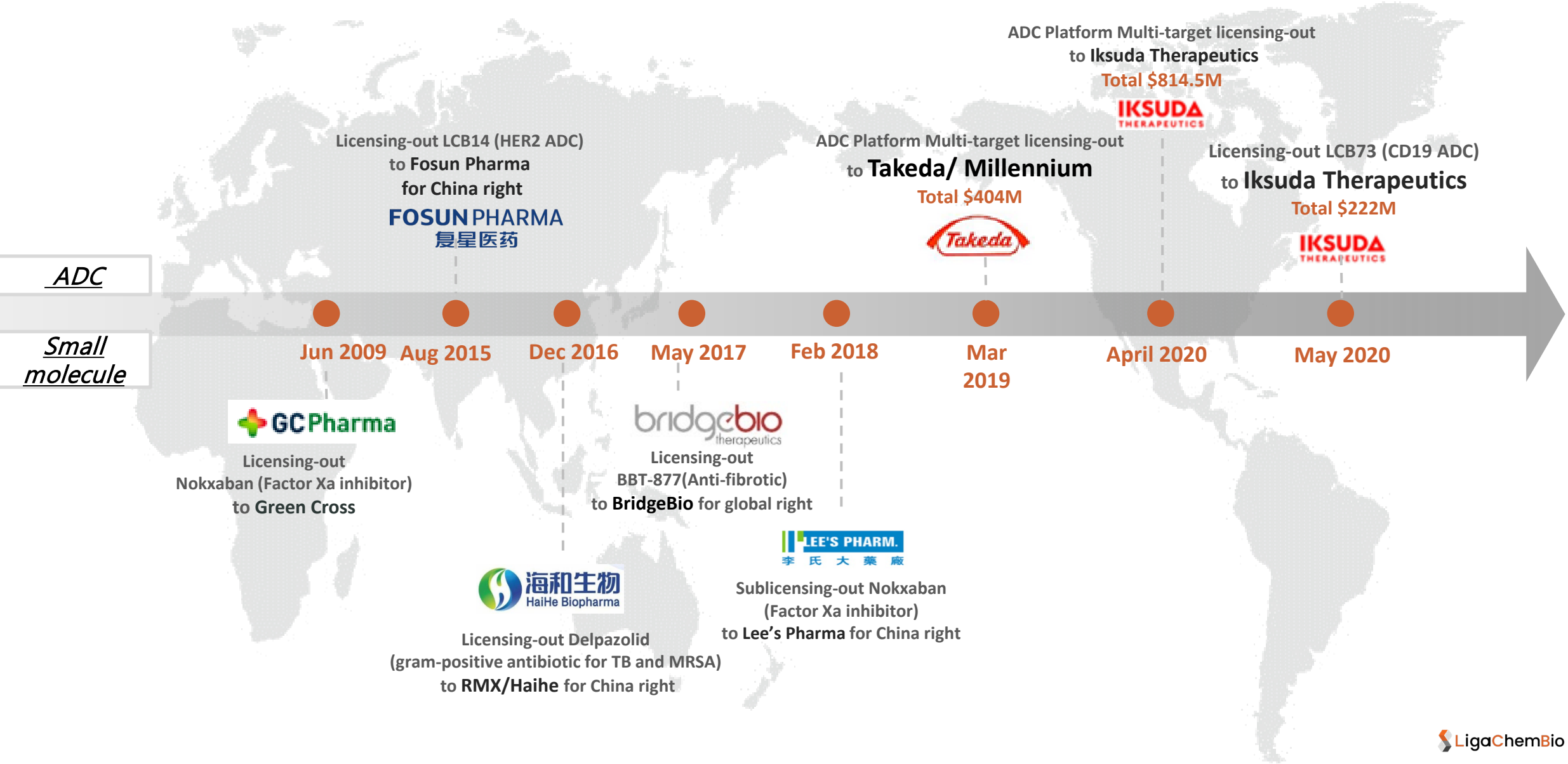
03 Strategic Partner of Big Pharma

Major global pharma companies see us as their 'Strategic Partner' for ADC assets development, highly valuing our comprehensive 'One Stop Shopping' services.

Ligachem ADC platform "ConjuAll" has the most disclosed ADC programs in space.



Licensing Deals(1)



Licensing Deals(2)

LigaChemBio

Licensing-out LCB71 (ROR1 ADC)
to **CStone Pharma**
Total $363.5M

基石药业 CSTONE PHARMACEUTICALS

Licensing-out LCB67 (DLK1 ADC)
to **Pyxis Oncology**
Total $294M

PYXIS ONCOLOGY

ADC Platform Multi-target licensing-out
to **Sotio biotech**
Total $1B

sotio MEMBER OF PPF GROUP

Co-Development & Licensing-out
LCB14 (HER2 ADC)
to **Iksuda Therapeutics**
Total $1B

IKSUDA THERAPEUTICS

ADC Platform Multi-target licensing-out
to **AMGEN**
Total $1.25B

AMGEN

Licensing-out LCB84 (TROP2 ADC)
to **Janssen Biotech**
Total $1.7B

janssen PHARMACEUTICAL COMPANIES OF Johnson & Johnson

ADC

Oct 2020 | Dec 2020 | Nov 2021 | Oct 2021 | Dec 2022 | Dec 2023

13 ADC licensing/option agreements

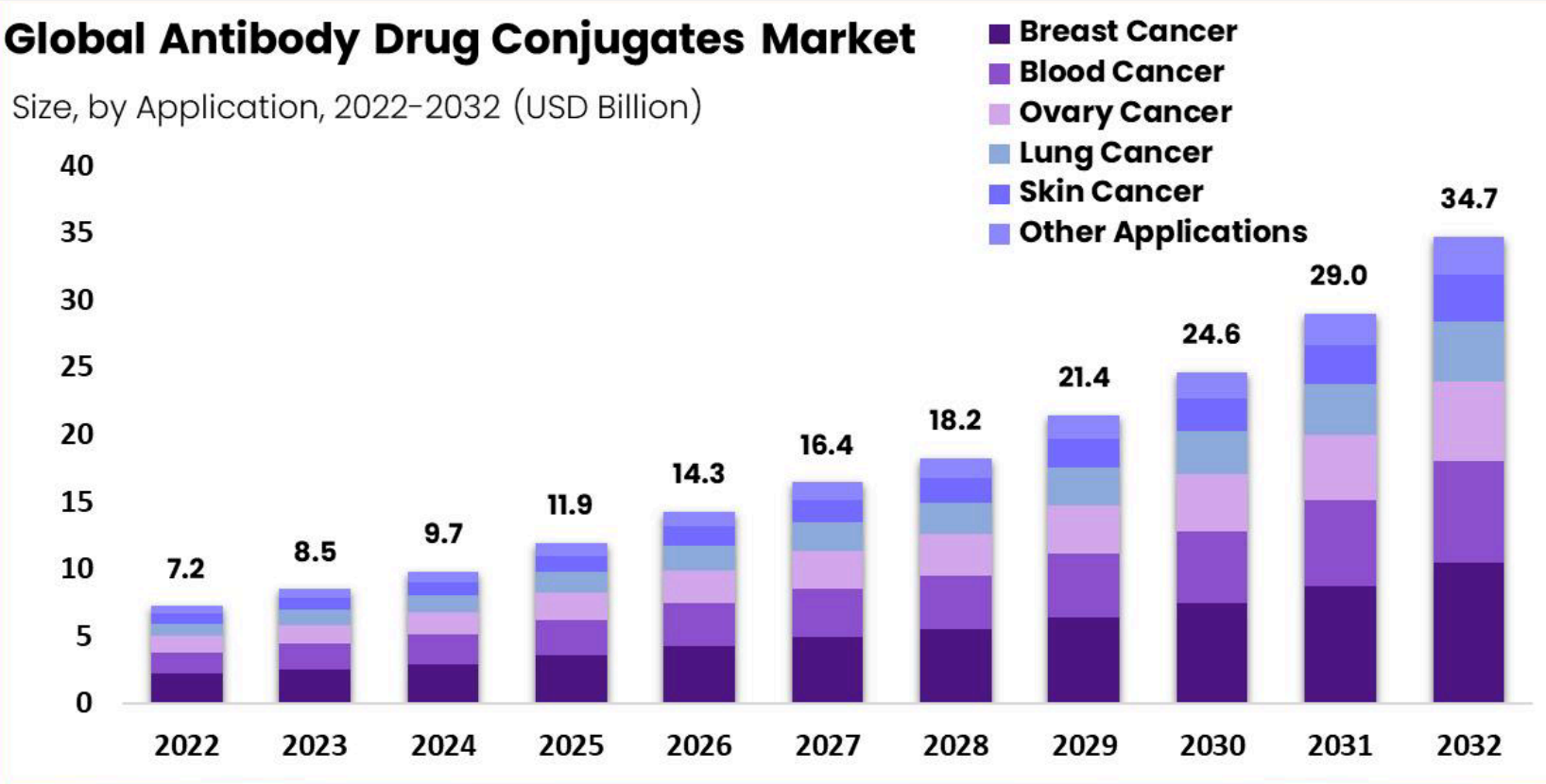
Total deal >$7.6bn

Rapid-growth in ADC Business :

Market Size & Active Global Deals

LigaChem has positive opportunities as ADC Market shows great expansion.

- ADCs market was valued at USD 7.2 billion in 2022 and is expected to reach USD 34.7 billion by 2032, with a CAGR of 17.5% between 2023 and 2032.

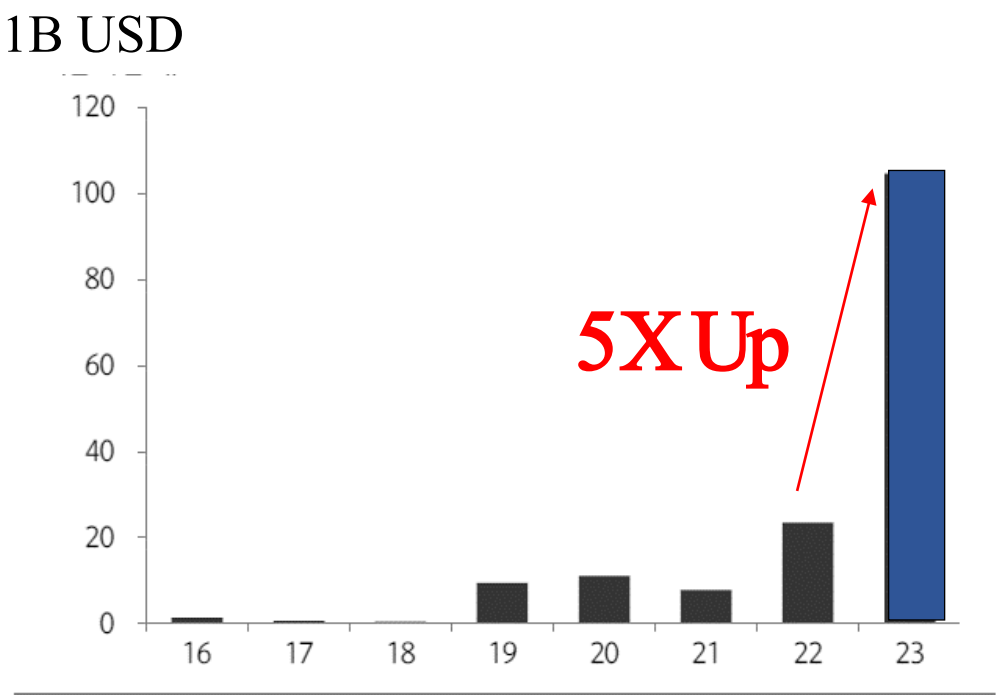


Resource : market.us

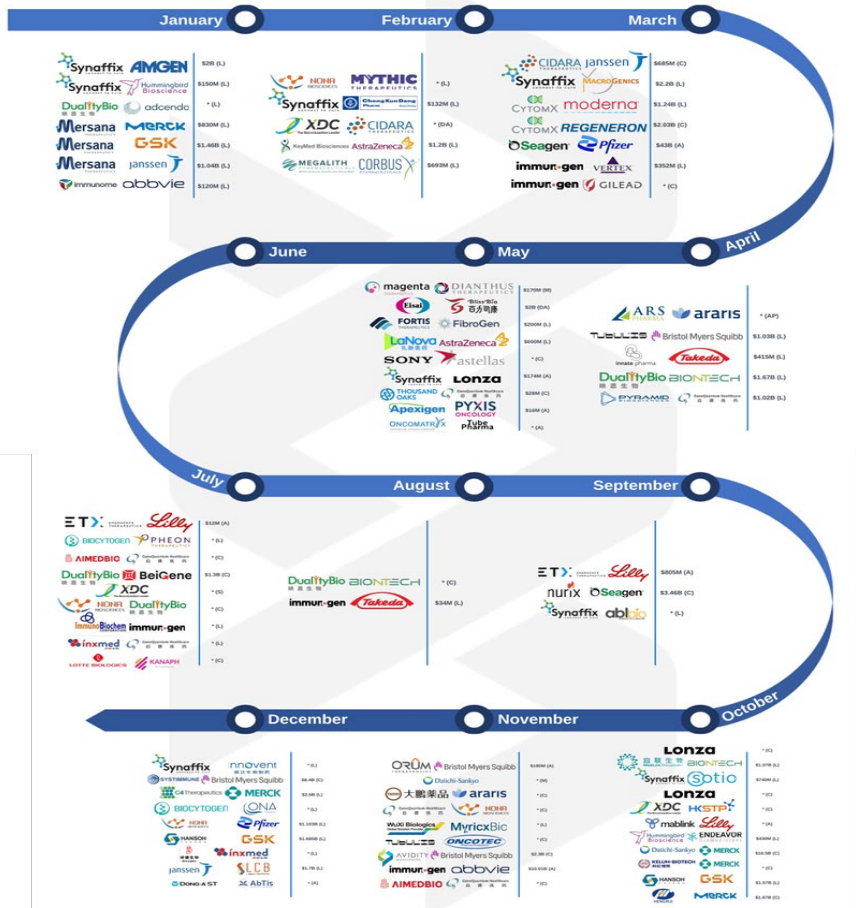
Global interest in ADCs has surged even further in 2024

- ADC-related deals aggressively spiked, peaking in 2023 with a fivefold increase from the previous year.
- With ADC sales trending upward, investors and Big pharma have persisted in optimistic stance towards ADCs in 2024

ADC-related M&A and licensing deal trends



ADC deals in 2023



Resources: GlobalData, Hana Security (left), BioProcess International (right)

Rising demands on LCB's ADC technology has emerged,

as competitors have declined while Big Pharmaceuticals have rapidly expanded their ADC business.

ADC Demand Surplus ↑
(Big Pharmaceuticals)

- **ADC Global Deals in 2023**

Licensor	Licensee	Upfront (US$M)	Total (US$M)	Target	Stage	Date
Daiichi Sankyo	**Merck & Co**	4,000	22,000	HER3; B7H3; CDH6	Phase3; 2; 1	2023.10
SystImmune	**BMS**	800	8,400	EGFRXHER3	Phase1, 15 programs in China	2023.12
LigaChem Bioscience	**Janssen Biotech**	**100**	**1,700**	**TROP2**	**Phase1**	**2023.12**
Jiangsu Hansoh	**GSK**	185	1,700	B7H3	Phase2	2023.12
Duality Biologics	**BioNTech SE**	170	1,670	HER2	Phase2	2023.04
Jiangsu Hengrui	**Merck KGaA**	169	1,648	CLDN18	Phase2	2023.10
Jiangsu Hansoh	**GSK**	85	1,570	B7H4	Phase1	2023.10

ADC Supplier Surplus ↓
(ADC biotechs recently merged by big pharma)

Recent Competitor's M&A

Immunomedics -> Gilead ($ 21bn)	**2020.9**
Seagen -> Pfizer ($ 43bn)	**2023.3**
Synaffix -> Lonza ($ 195M)	**2023.6**
Immunogen -> AbbVie ($ 10.1bn)	**2023.11**
Ambrx -> J&J ($ 2bn)	**2024.01**

Our Pipeline

LigaChemBio

Licensed out
Internal program

ADC Products Pipeline

Project	Indication	Discovery	preclinical	Phase 1	Phase 2	Phase 3	Antibody Provider	License Status	Licensee
LCB14 HER2-MMAF	BC						Herceptin Biosimilar	Fosun (China)	FOSUNPHARMA 复星医药
	BC (vs T-DM1)								
	Solid (GC / GC + PD-1 / CRC / NSCLC / Multi solid)								
	Solid						Herceptin Biosimilar	IKSUDA (ex-China)	IKSUDA THERAPEUTICS
LCB71 ROR1-pPBD	Solid, Heme						ablbio	CStone (ww)	基石药业 CSTONE PHARMACEUTICALS
LCB84 TROP2-MMAE	Solid						mediterranea	LCB	janssen Johnson&Johnson
LCB73 CD19-pPBD	Heme						LIGHTCHAIN BIOSCIENCE	IKSUDA (ww)	IKSUDA THERAPEUTICS
LCB67 DLK1	Solid						Y BIOLOGICS	U/D (ww)	-
LCB97 L1CAM	Solid						elthera tailored cancer therapies	LCB	-
LCB02A Claudin18.2-TopoI	Solid, Heme						HARBOUR BIOMED	LCB	-
LNCB74 B7-H4-MMAE	Solid						NextCure	LCB & NextCure	-
LCB36 CD20 X CD22-pPBD	B-cell lymphoma						LCB	LCB	-
LCB22A, LCB45A	Solid						GO THERAPEUTICS	LCB & U/D	-
LCB28A	Solid						GLYCOTOPE	LCB	-

Pipeline : Antibody-Drug Conjugates

Licensed out
Internal program

ADC Platform Pipeline

Project	Indication	Discovery	preclinical	Phase 1	Phase 2	Antibody Provider	License Status	Licensee
LCB69 AIC	Solid, Heme					Takeda	Takeda (ww)	Takeda
LCB85 CanAg-pPBD	Solid, Heme					IKSUDA THERAPEUTICS	Iksuda (ww)	IKSUDA THERAPEUTICS
LCB20A	-					sotio	Sotio (ww)	sotio
LCB42A	-					AMGEN	Amgen (ww)	AMGEN
LCB91	Solid, Heme					undisclosed	undisclosed	undisclosed
LCB06A	-					undisclosed	undisclosed	undisclosed
LCB18A	-					undisclosed	undisclosed	undisclosed
LCB36A	-					undisclosed	undisclosed	undisclosed

Pipeline : Small molecules

LigaChemBio

Licensed out

Internal program

	Project	Indication	Discovery	preclinical	Phase 1	Phase 2	Phase 3	Partner	Remarks
Anti-biotics	Delpazolid (Gram +)	- DS-TB - MDR-TB - MRSA/ VRE	Preclinical (USA) / ph 1, ph 2a (Korea)					-	- Orphan Drug - QIDP - Fast Track
			DS-TB : Phase 2b (South Africa, Tanzania)						
			Preclinical (USA) / ph 1, ph 2a (Korea)						
			MRSA Bacteremia : Phase2						
			China					海和生物 HaiHe Biopharma	- L/O for China ('16.12)
Anti-fibrotic	LCB17-0877 (ATX Inhibitor)	IPF, fibrotic diseases	USA					bridgebio therapeutics	- L/O for global (Profit Sharing)
Anti-coagulant	LCB02-0133 (Nokxaban, FXa Inhibitor)		USA					GC 녹십자	- L/O for global (Profit Sharing)
			China					LEE'S PHARM. 李氏大藥廠	- Sub L/O for China ('18.01)
Anti-cancer	ATX inhibitor (Next Gen)								- Combi with ADC
	Immuno-oncology (AIC payload & Combi therapy)		ENPP1 i						- Combi with ADC
			LBG-STING agonist						- AIC - Combi with ADC
									- AIC - Combi with ADC
									- Combi with ADC

Near-mid term Catalyst

	2H24	2025	
Presentation Updates	ASH	LCB87 (ROR1-ADC) LCB36 (CD20xCD22 Bs-ADC) LCB73 (CD19-ADC)	
IND Submission	LCB41(B7-H4-ADC)	Bs-ADC	LCB36 (CD20xCD22 Bs-ADC)
		Novel target ADC	LCB22A (O-glycoprotein ADC) LCB45A (O-glycoprotein ADC)
		Immuno-Oncology	LBG-STING (AIC Payload & Combi therapy) ENPP1 (Small Molecule for Combi therapy)
Phase 1 Study start	LCB84 (TROP2-ADC, Ph 1) LCB71 (ROR1-ADC, Ph 1b) LCB73 (CD19-ADC)	LCB97 (L1CAM-ADC) LCB41(B7-H4-ADC)	
Phase 2 Study start		LCB84 (TROP2-ADC, tentative)	
Phase 3 Study start		Delpazolid (Gram-positive Antibiotics)	
New Drug Approval		LCB14 (HER2-ADC, China)	

Leading international Scientific Advisory Board in the field of ADC and antibiotics to support the global development of pipeline

Scientific Advisory Board

Bob Lutz
ADC Development

- 30 years of pharma/biotech experience
- ImmunoGen VP, Translational Research & Development(23 years)
- Led '8'ADCs(including Kadcyla) to clinical trials
- Prensent CSO of Iksuda

Rakesh Dixit
ADC Toxicology/Safety

- 30 years of pharma/biotech experience
- AstraZeneca/Medimmune VP & Global Head of Biologics Safety Assessment, Merck, J&J
- The 100 Most Inspiring People in the Pharmaceutical Industry by PharmaVoice in 2015
- A key contributor to '10'different approvals <Imfinzi (anti-PD-L1 mab), Fasenra (anti-IL-5R afucsolytated mab), Brodalumab (anti-IL-17), etc>

Morris Z. Rosenberg
ADC Manufacturing/CMC

- 30 years of pharma/biotech experience
- Seagen EVP/Immunomedics CTO
- Led launch of Trodelvy, Adcetris, Avonex, Angiomax, Xigris, and Forteo

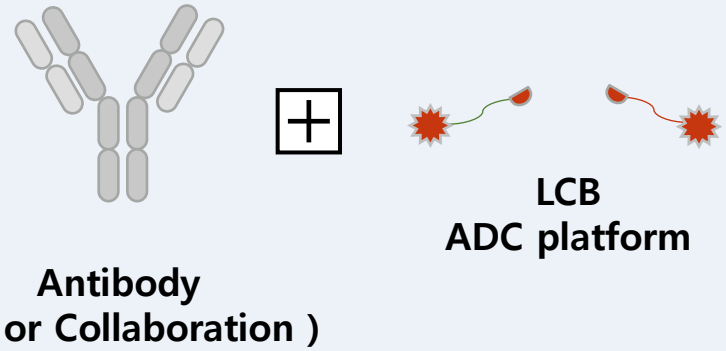
Lawrence Geiter
Antibiotics Development

- 30 years of tuberculosis drug R&D experience
- Otsuka VP, Head of Global Clinical Development of novel products-TB
- Led clinical trials of Deltyba(delamanid, Otsuka)
- Leading phase 2b of Delpazolid in Legochem

Business Strategy for Adding Value

LCB Two Business Models : Licensing Out

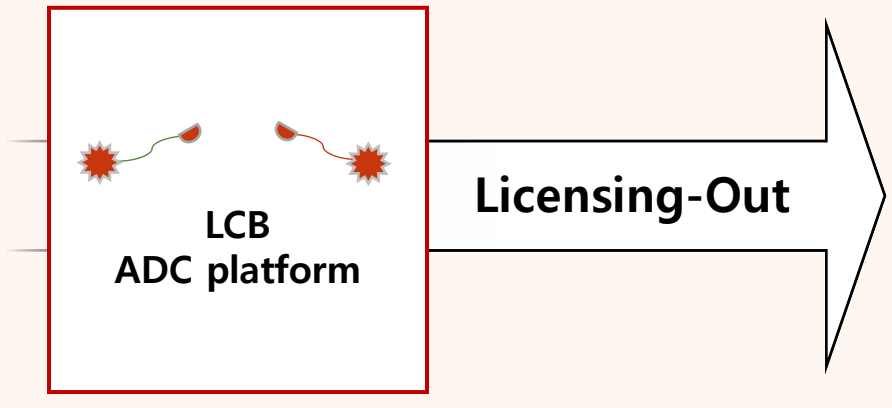
1. ADC Products L/O



Licensing-Out

Advancing ADCs to IND/clinic
to increase value

2. ADC Platform L/O

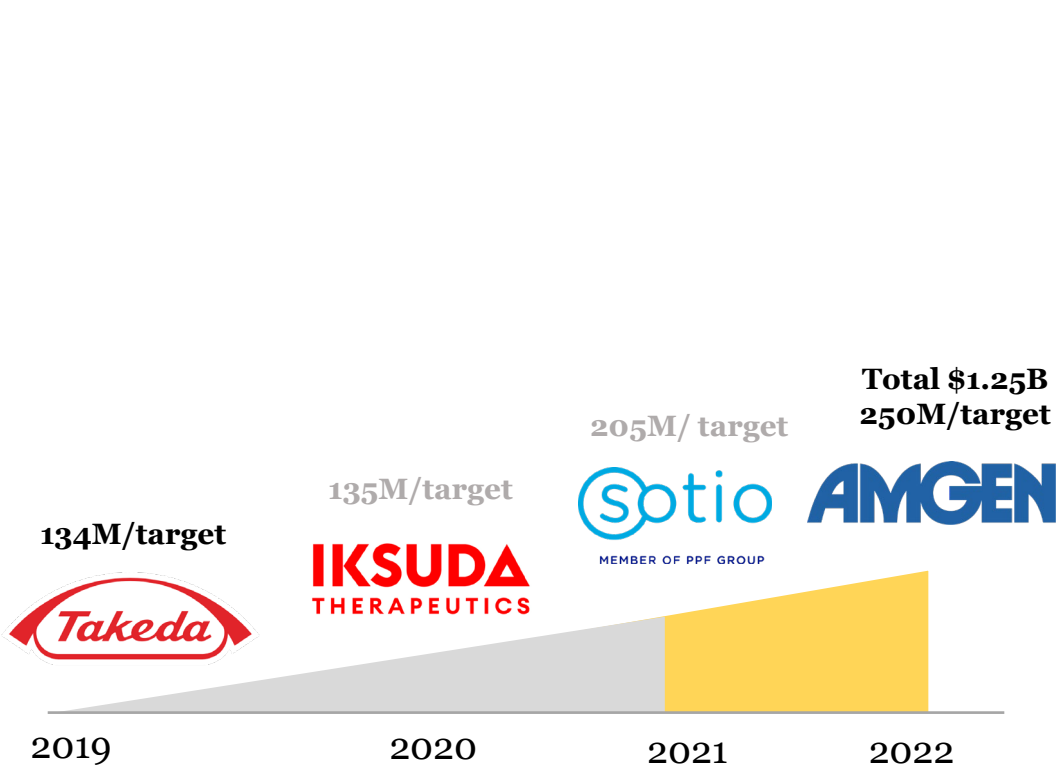


A. Partner drives its own dev/commercialization
-> Milestone + Royalty

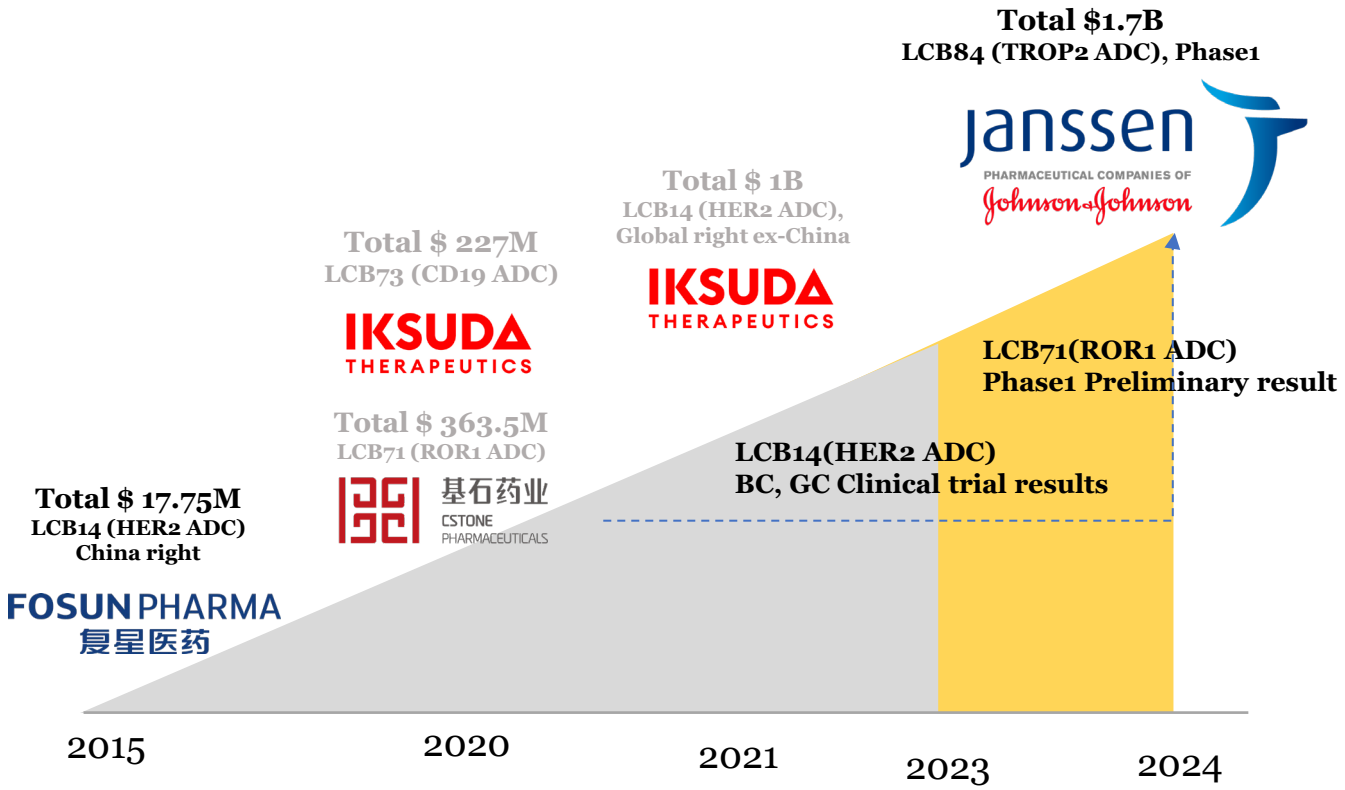
B. Partner Sublicenses ADC to 3rd party
-> Milestone + Royalty
+ Profit sharing (optional)

Raised Value through Deal Trajectory

- LCB previously pursued to validate its technology via clinical outcome achieved by partners, licensing out at competitive price to expedite clinical development by leveraging partner resources.
- To raise asset value, ACB established in Boston to internalize clinical capabilities, and successfully initiated Phase 1 studies for LCB84.
- Competitive clinical results from HER2 ADC & ROR1 ADC elevated the value of our assets and technology.
- Most recent licensing deal for LCB84 with Janssen for significantly increased value, securing $100M cash upfront and a total of $1.7B deal.



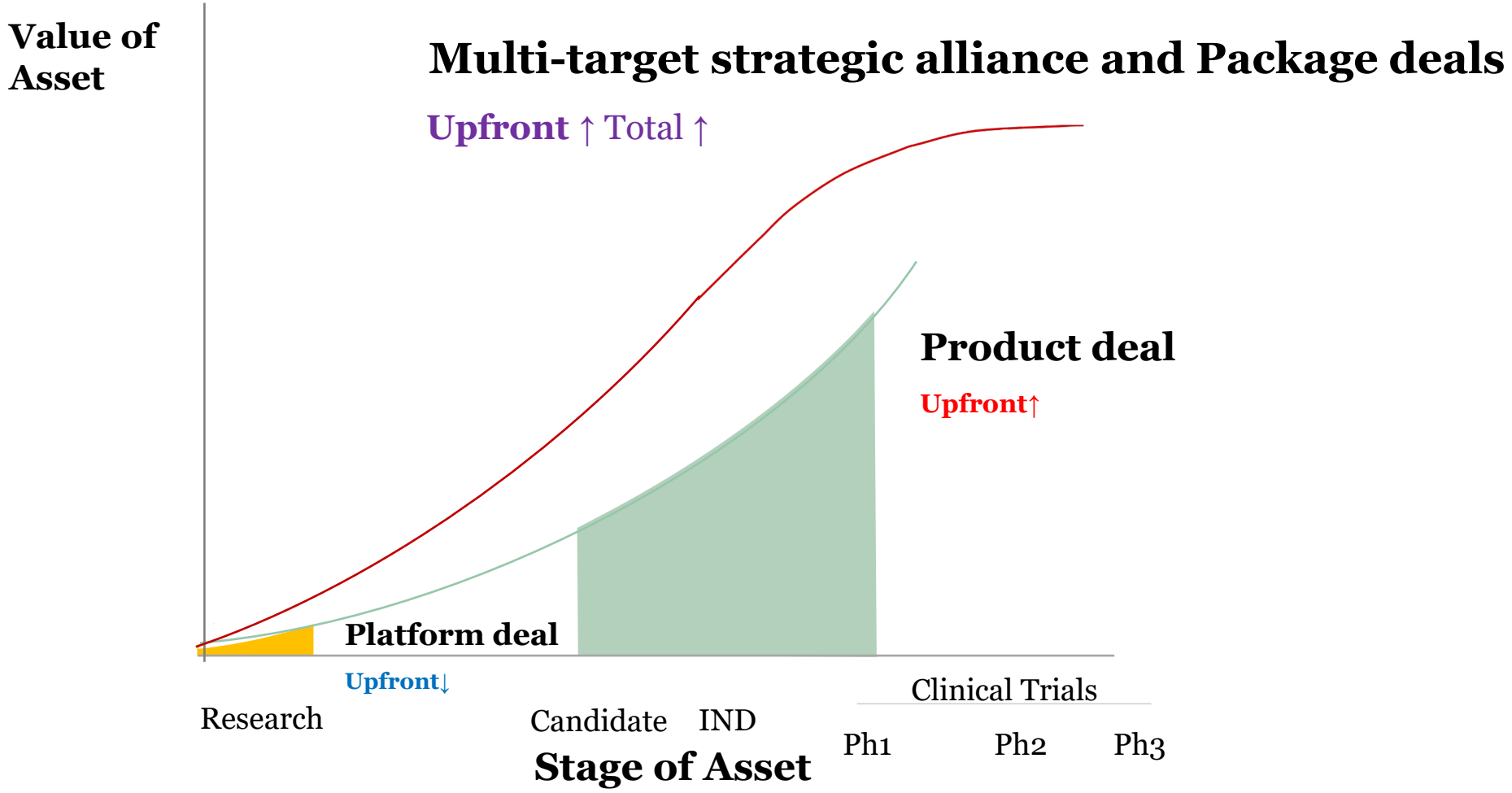
[Platform Deal]



[Product Deal]

Business Strategy Shift

- LCB prioritizes high-value product deal and Package deal over platform deals.
- Multi-Target Package deal, for multiple assets or combining a platform and a product, is our new type of licensing deal.



OUR VISION 2030

- To be the Global ADC company by widening the gap from latecomers

- Accelerated targeted timeline and increased products

2024

- Accelerating Developing Speed
  (5 candidates per a year)
- Expanding modalities for a new driven force
- Influx of R&D Capital with PAN ORION Corp's investment
  (Total $500M is secured for R&D cash)
- Continuous high value Licensing deals
  (including package deal, IND or clinical stage L/O)

2030

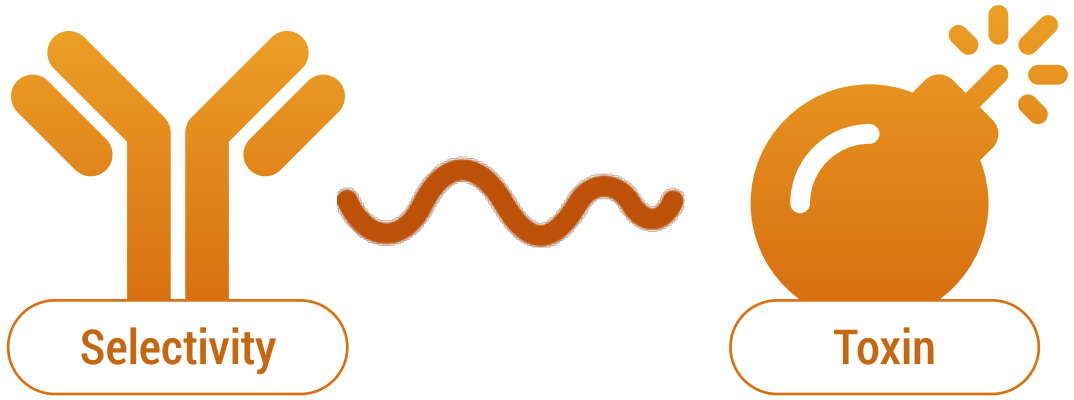
- X2 Internal Products
  with diverse modality assets
  (Oncology, Bispecific)
- +5 Internal Clinical stage products
- +1 Commercial drug
- Stable Revenue based on royalties and milestones

23

Our ADC technology

Antibody-Drug Conjugate?

ADC concept



- Antibody's selectivity + Small-molecule's efficacy
- Primarily applied to oncology antibodies
- Future expansion to other indications beyond oncology

The challenge:

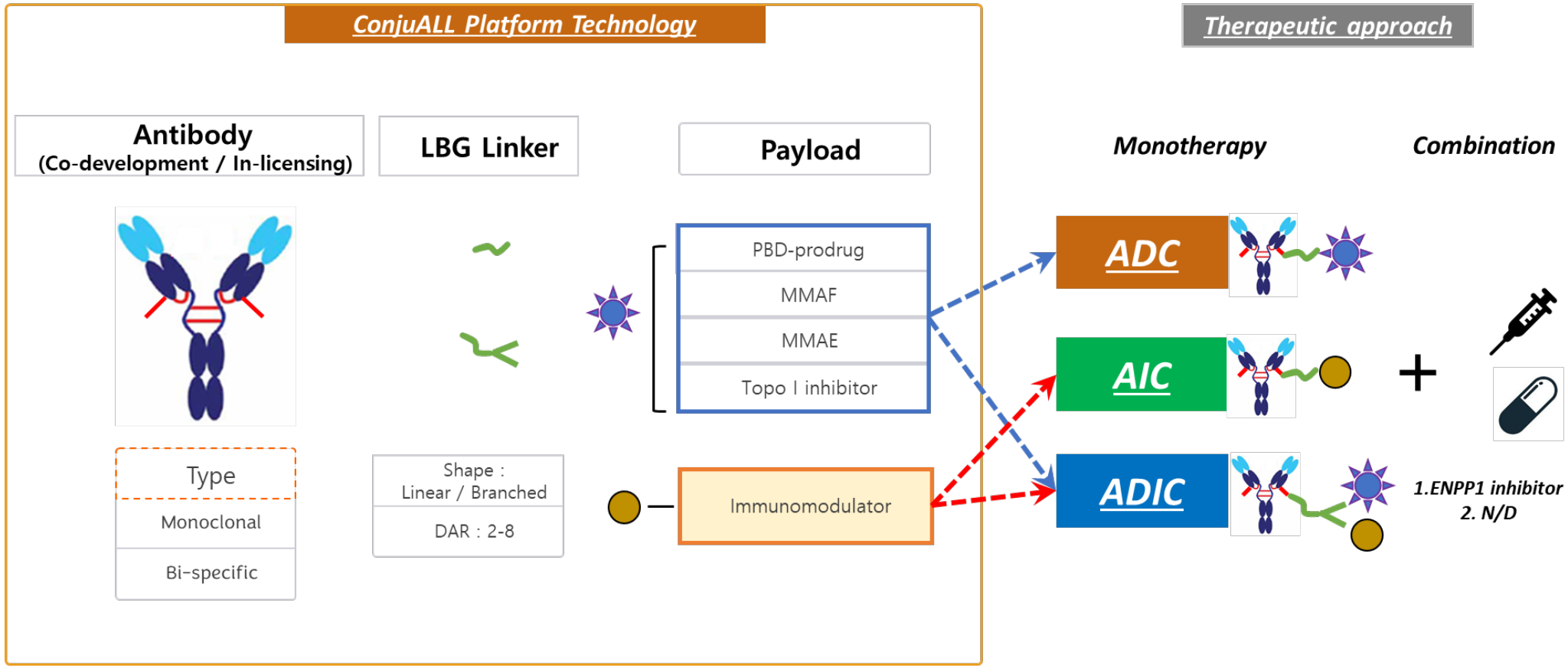
- Undesirable toxicities due to:
  - Premature payload release
  - Non-specific uptake of intact ADC
- Inadequate dose intensity due to safety issues

LCB's solution:

- Unprecedented safety and efficacy due to:
  1. Proprietary bioconjugation technology – ConjuAllTM
  2. Proprietary plasma-stable, tumor-selective linker activation mechanism
  3. Proprietary tumor-activated ultrapotent payload

Innovative Outreach for creating future value

Bi-specific, Immunomodulator



What Differentiates LCB's ADC Platform vs. Competitors?

- **Tumor-selective cleavable beta-glucuronide linker taking advantage of high expression of beta-glucuronidase in tumors versus normal tissues**
  - Recognized by a cancer-selective lysosomal enzyme, beta-glucuronidase
  - Releasing the payload in cancer cells only
  - **High bystander effect providing extensive tumor killing to neighboring cells**
  - Significantly more stable in circulation than competitors' linkers

- **Proprietary ultra-potent payload** with tumor-specific activation leading to improved potency and safety

- **Superior efficacy/ reduced toxicity with improved TI**

- Novel site-specific conjugation platform providing unprecedented (long-term) plasma stability
  - Improved manufacturing and CMC properties resulting in homogenous ADC drug product with defined Drug Antibody Ratio (DAR)

LCB's approach: site-specific ADCs with highly stable linker

LigaChemBio

Bioconjugation

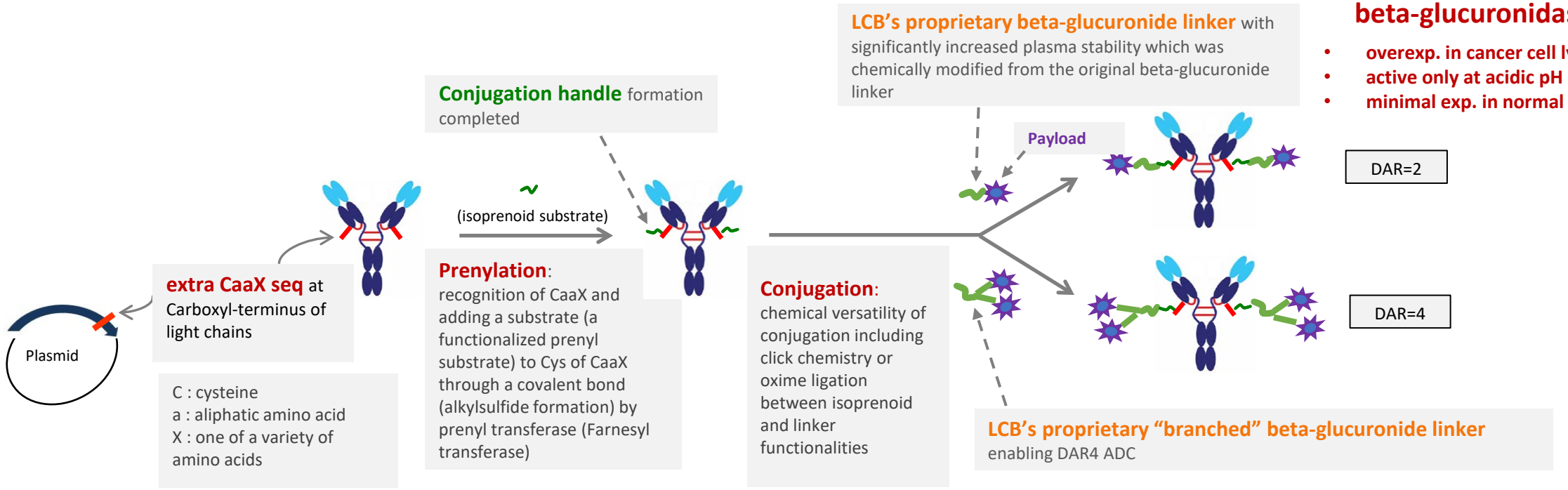
- **Site-specific & Homogeneous DAR** (Defined)
- Antibody expression with extra sequence @ C-term (Heavy chain or Light chain)
- Specific functionalization via prenylation

Linker

- **Plasma-stable linker** (no unstable thiol-maleimide conjugation)
- **Efficient release of toxin** inside the target cancer cell with **tumor-selective proprietary glucuronide trigger**

Payload

- LCB's conjugation/linker system is **compatible to most payload** including **LCB's proprietary PBD prodrug** or **Microtubule inhibitor**, other DNA-damaging (Azonafide, Ducarmycin, non-PBD monomeric DNA binders), Topoisomerase inhibitor
- Well-tolerated efficacious ADC payload



Advantages of LCB's bioconjugation platform

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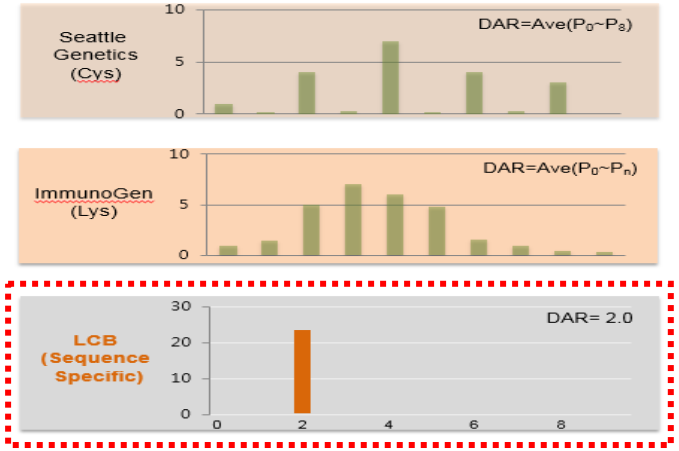
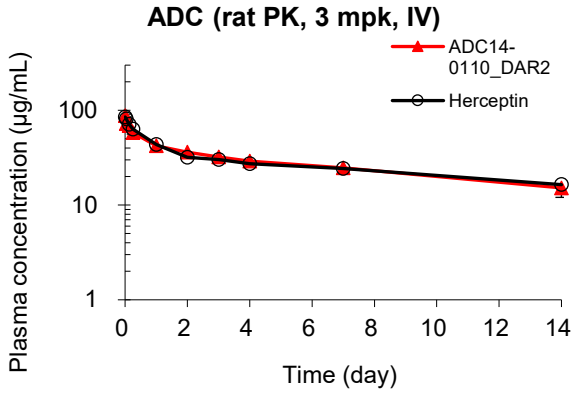
Site-Specific Conjugation

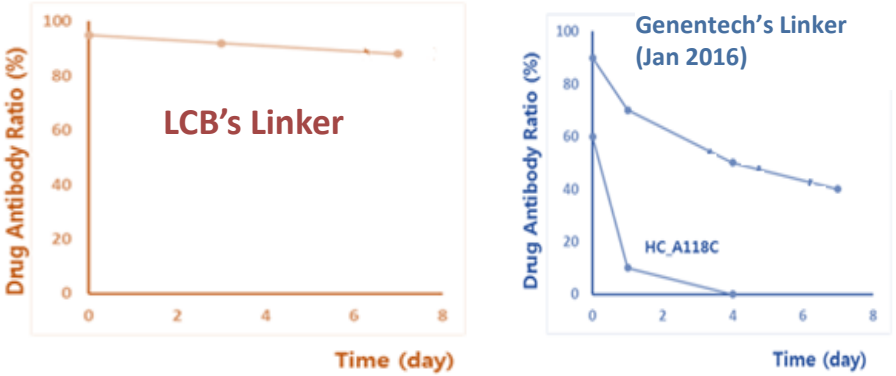


PK of ADC = PK of parental mAb

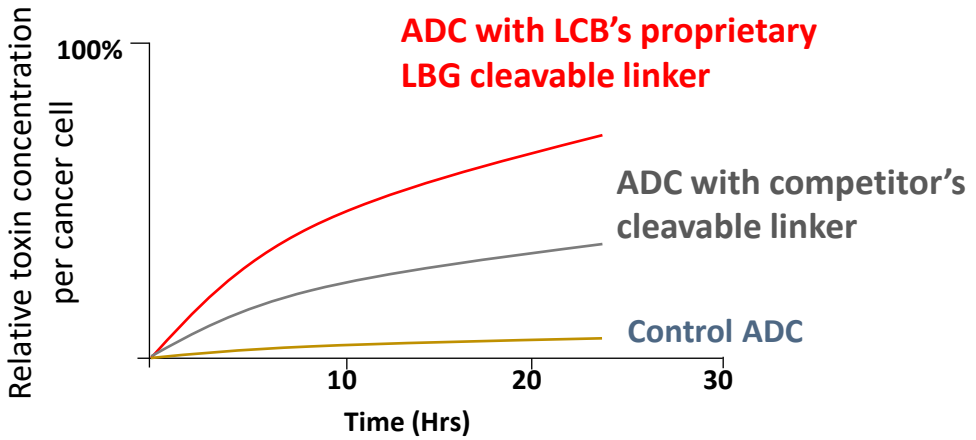


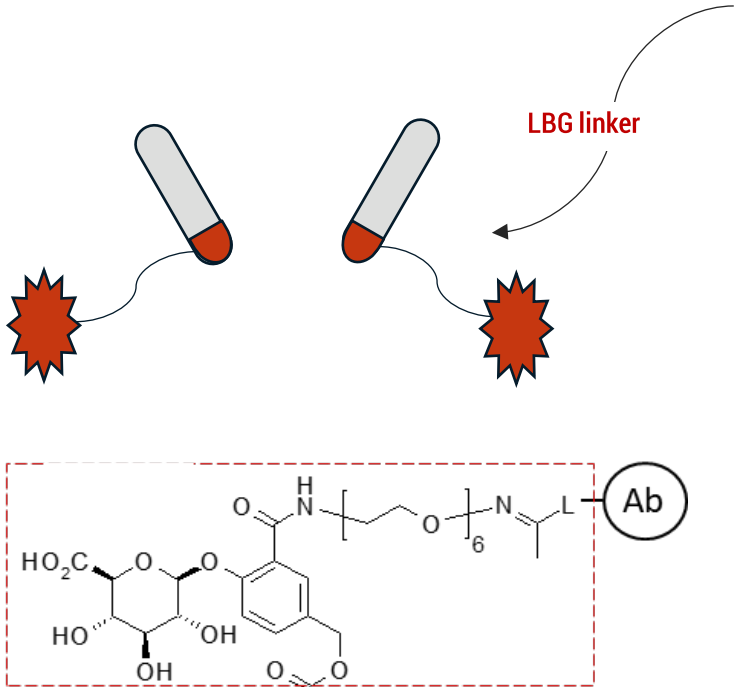
Linker Stability

Cyno *in vivo comparison*



Efficient Cancer-Selective Toxin Release





LCB's β-Glucuronide Linker - LBG

: Tumor selective payload release via β-Glucuronidase cleavage

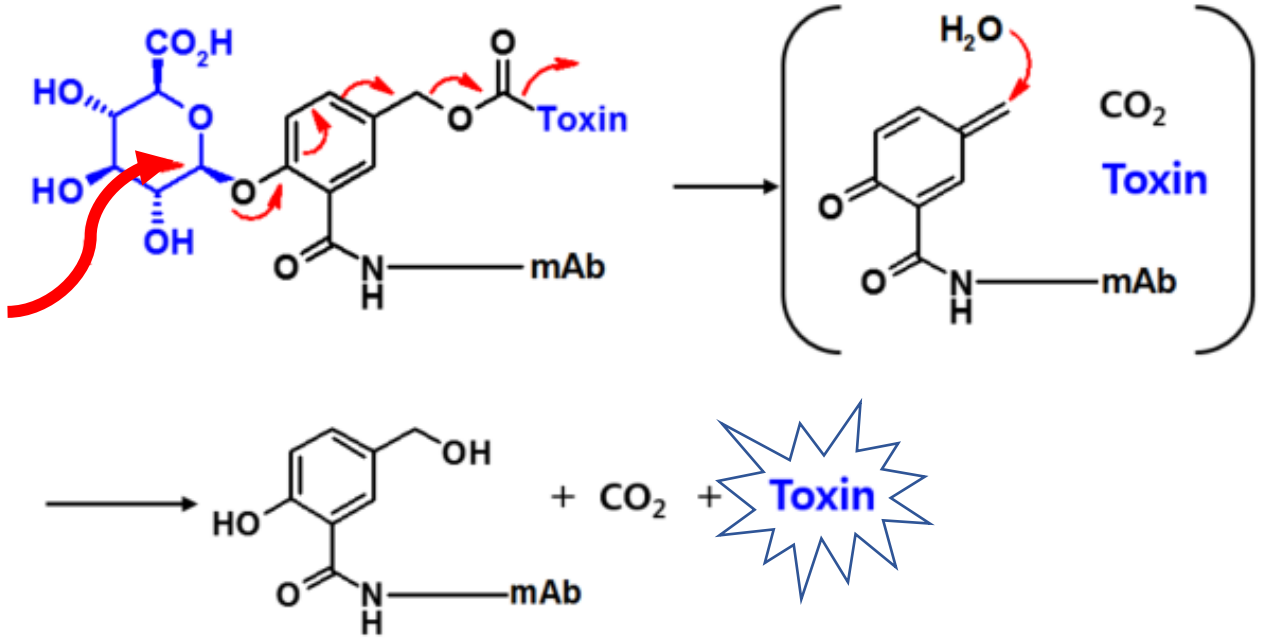
Minimizes toxicity in non-tumor cells

- Plasma stable and tumor labile
- Highly selectively cleaved in cancers by specifically cancer overexpressed enzyme
  -> Mitigates off - and on-target toxicity
- Allows for bystander effect, Immunogenic Cell Death, etc.
- Compatible across payload classes
- Strong IP protection: Patent issued in US

Cancer-selective toxin release by LCB's proprietary beta-glucuronide linker

Beta-glucuronidase
in cancer environment

- overexpressed in cancer cell lysosome
- active only at acidic pH
- minimal expressed in normal cells

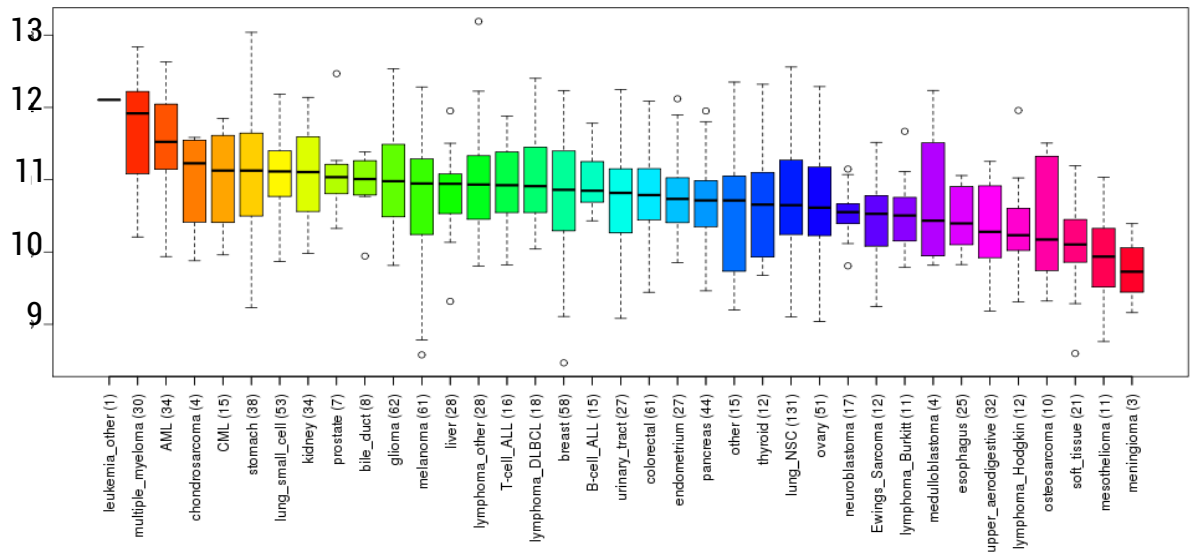


Efficient and traceless toxin release within cancer cells by glucuronide trigger chemistry and cancer-overexpressed lysosomal glucuronidase enzyme

LBG reduces off and on-target toxicity due to β-glucuronidase (GUSB) expression patterns

- GUSB expression is increased at both the mRNA and protein level across tumor types
  - Hematologic, Solid (lung, breast, GI, etc)
  - Due to inherent metabolic requirements of tumor growth
  - Selective release of active payload at the tumor

GUSB mRNA Expression Level (RMA log2)



[CANCER RESEARCH 53, 3541–3546, August 1, 1993]

Main Drug-metabolizing Enzyme Systems in Human Breast Tumors and Peritumoral Tissues[1]

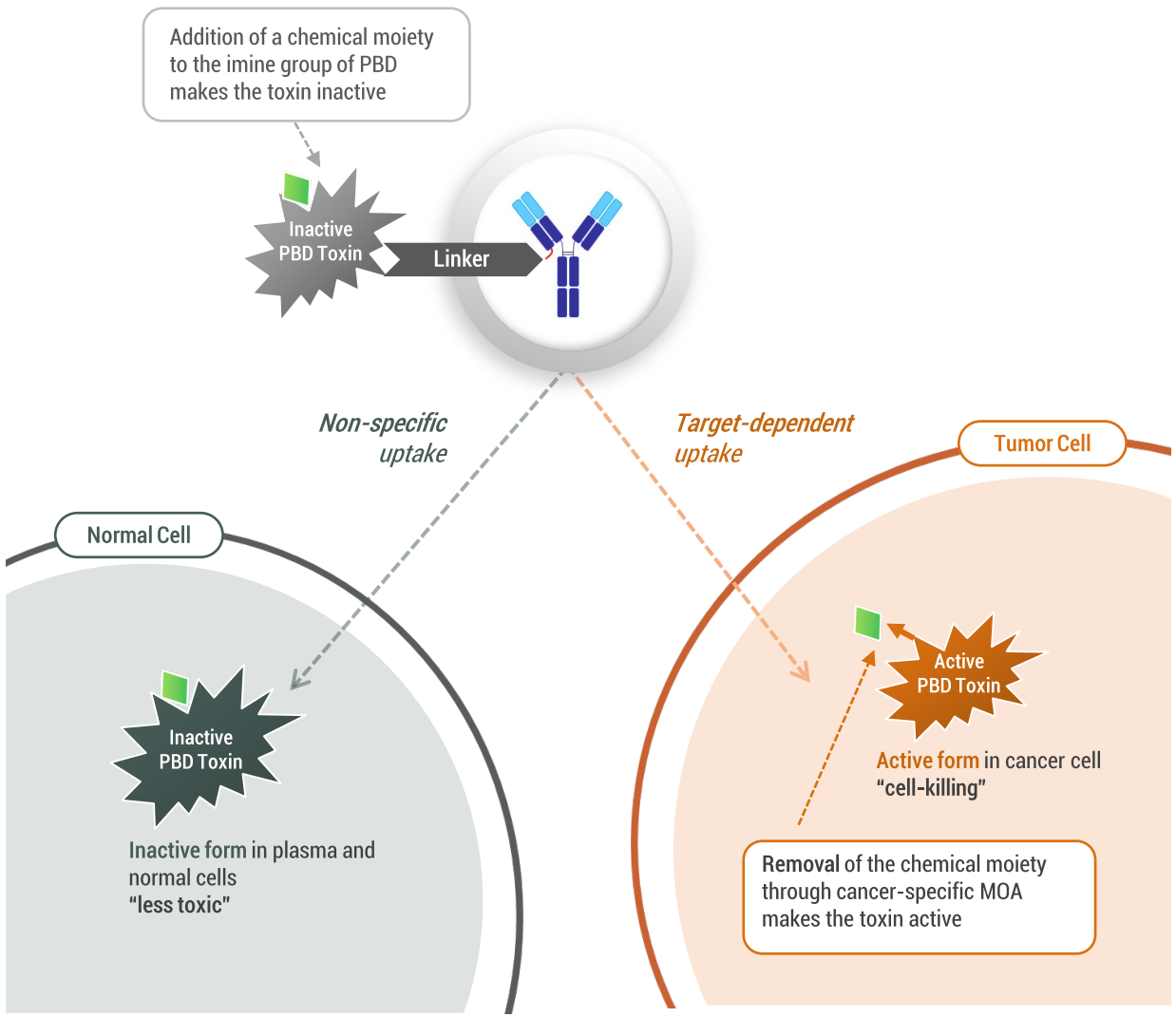
Table 4 *Summary of the comparison of human breast tumors and peritumoral tissues with regard to main drug-metabolizing enzyme systems*

Enzymes	Tumor	Peritumoral tissue	P
Cyt P-450[a]	ND[b]	ND[b]	
Epoxide hydrolase	+	+	NS[c]
CDNB-GST	+++++	+	<0.01[d]
GST-α	ND[b]	ND[b]	
GST-μ	+++++	+	<0.01[d]
GST-π	+++	+	<0.01[d]
GSH	+	+	NS[c]
UDP-GT	+	+++++	<0.05[d]
Sulfotransferase	+	+	NS[c]
β-Glucuronidase	++++++	+	<0.01[d]
Sulfatase	++	+	<0.05[d]

[a] Cyt P-450, Cytochromes P-450: 1A1/A2; 2B1/B2; 2C8–10; 2E1; 3A4.
[b] ND, not detectable.
[c] NS, not significant.
[d] Wilcoxon test between tumoral and peritumoral breast tissues.

Enzymes	Breast Tumor	Adjacent Normal	P
β-Glucuronidase	++++++	+	<0.01[d]

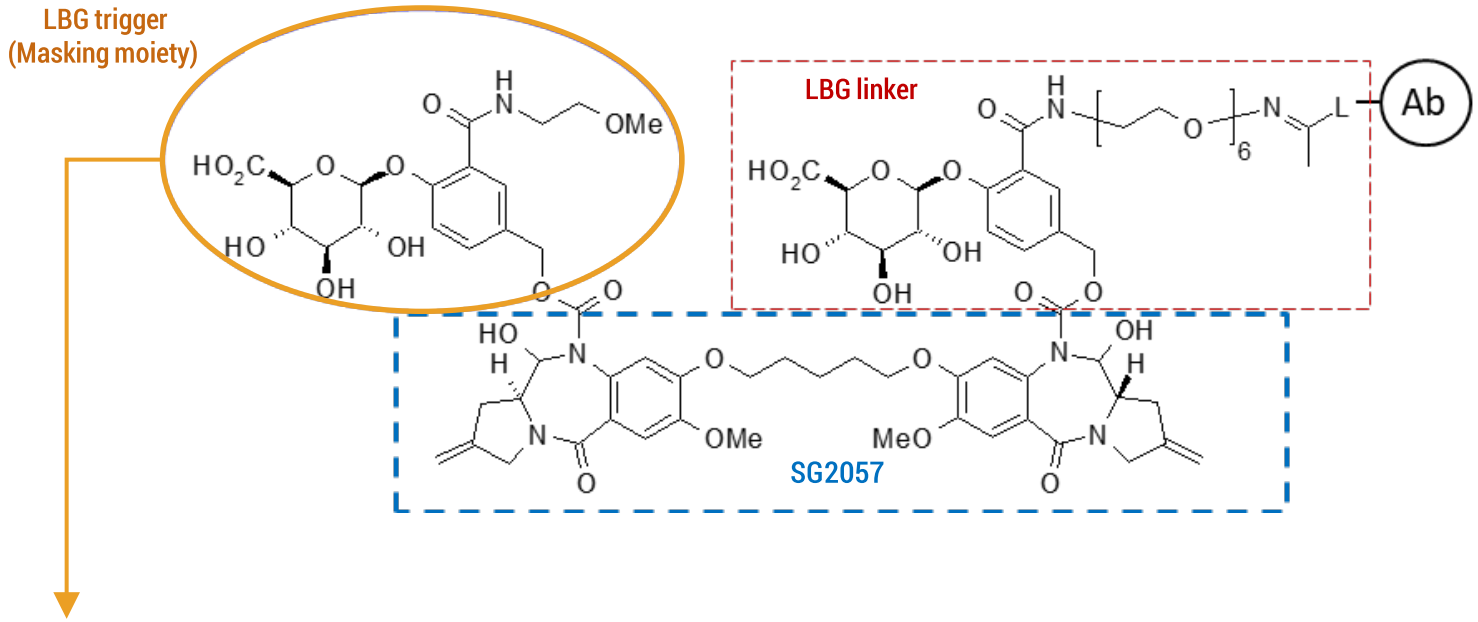
LCB's proprietary PBD prodrug payload technology



	Conventional PBD-ADC	LCB's Proprietary PBD-ADC
PBD Characteristics	• Potent DNA damaging agent • Labile imine group leading to CMC challenges	• Potent DNA damaging agent • Protected imine with **improved CMC properties** • Improved hydrophilicity for **improved solubility** • Improved linker chemistry for **improved PK**
ADC Production	• Heterogeneous ADC even with site-specific approaches due to imine-adducts during manufacturing	• **Homogenous final ADC**
Antibody Conjugation Method	• Mostly unstable Cys-maleimide coupling (Thiomab approach)	• Highly stable oxime or Click ligation for **improved stability**
Toxicity	• Safety issues due to premature release of free PBD and non-specific uptake of ADC • Narrow therapeutic index • Delayed toxicity observed	• Stable tumor-activated prodrug technology prevents normal tissue damage for **reduced toxicity** • **Improved therapeutic index**

Chemistry and MOA of LCB's PBD prodrug

"dPBD Prodrug" - *LBG linker



LBG hydrophilic masking moiety attached to PBD is removed predominately within cancer cells by its cognate enzyme, beta-glucuronidase, overexpressed in almost all of known solid and blood cancers, not in normal cells → same MOA as LCB linker cleavage

Beta-glucuronidase is predominately active and present in cancer cells' lysosome, which is the destination of ADCs after receptor-mediated endocytosis

HER2

ROR1

BC

GC

Multiple Solid

Lymphoma

Clinical Trial Results

ASCO 2023

FS-1502(LCB14) Phase 1a dose escalation and phase 1b expansion Interim Results

Indicates a significant potential to be a Game-changer in HER2 ADC market

LCB14 (Trastuzumab-DAR 2 MMAF)

nature communications

Article | Open access | Published: 17 June 2024

HER2-targeting antibody drug conjugate FS-1502 in HER2-expressing metastatic breast cancer: a phase 1a/1b trial

LCB14, a Game Changer in HER2 ADC Market

LCB 14 Phase 1 data showed **superior efficacy and toxicity** **in comparison to FDA -approved drugs,** validating advantages of cancer selectively activating and plasma-stable **LCB linker** in human patients

		LCB14 (2.3mg/kg)	ENHERTU (5.4 or 6.4 mg/kg)	KADCYLA (3.6mg/kg)	BLENREP (2.5mg/kg)
ORR at RP2D		53.7% (36/67) - Interim	54.3% (31/57)		
Neutropenia	Grade≥3	5.6%	16% (5.4mg/kg)		
	Overall	10%	64% (5.4mg/kg)	72% (6.4 mg/kg)	
Thrombocytopenia	Grade≥3 in Asian	7.0%	45%		
Ocular tox	Grade≥3	0%	Keratopathy 44%, blurred vision 22%		

ASCO 2024

FS-1502(LCB14) Phase II study interim result compared to Trastuzumab deruxtecan (T-DXd)

The efficacy and safety evaluation of FS-1502 in HER2- positive locally advanced or metastatic gastric or gastroesophageal junction cancer.

FS-1502 (LCB14) shows consistent market potential as a best-in-class HER2 ADC in gastric cancer and breast cancer.

Market Potential

FS-1502 is emerging as a potential alternative to ENHERTU in the global ADC cancer drug market.

Unlike competitors using Exatecan, FS-1502 employs MMAF with a stable LigaChem Bio's LBG linker, showing great efficacy and a strong safety profile.

- ✓ FS-1502 would target the patient population resistant to Exatecan payload and those experiencing adverse effects from ENHERTU.
- ✓ Low side effect profiles could make our ADC the top choice for combination therapy in clinical settings.

FS-1502 (LCB14) shows consistent market potential as a best-in-class HER2 ADC in gastric cancer and breast cancer.

Efficacy Results:

- **Cohort 1 (N=16),** previously received ≥2 lines :
  - ORR: 37.5%, mPFS: 4.3 months, OS: 10.0 months
  - **Comparable to ENHERTU's DESTINY-Gastric06 trial** with ORR 35.6%, mPFS 5.7 months, OS 10.2 months.
- **Cohort 2 (N=19),** previously received first-line :
  - ORR: 52.6%, mPFS: 4.4 months, DOR: 8.3months, OS: 14.6 months
  - **Superior to ENHERTU's DESTINY-Gastric02 trial** only except for mPFS, with ORR 42%, mPFS 5.6 months, DOR 8.1months, OS 12.1 months.

Safety Results:

- FS-1502 demonstrated an excellent safety profile with no patients discontinuing treatment due to drug-related adverse events. No deaths related to drug side effects.
- Grade 3 or higher adverse events occurred in 12 patients (26.1%), mainly hypokalemia (6.5%) and fatigue (6.5%).
- In contrast, **ENHERTU had 56% of Grade 3 or higher adverse events, with 19% discontinuing treatment and two deaths** due to drug-related interstitial lung disease and pneumonia.

Previous and Ongoing Trials:

- FS-1502 had previously attracted attention at ASCO 2023 for showing similar efficacy and superior safety compared to ENHERTU in a Phase 1 breast cancer trial.
- FS-1502 is currently undergoing multiple Phase 2 trials in China for various solid tumors and a Phase 3 trial comparing it to Kadcyla in HER2-positive breast cancer patients

FS1502(LCB14) demonstrated comparable efficacy and significantly superior safety compared to T-DXd(ENHERTU) in each cohort of Phase2 study.

1. **FS1502 Cohort1,** patients received ≥2 lines of previous therapy

   VS **T-DXd, DESTINY-Gastric06**

2. **FS1502 Cohort2,** Patients only received first-line of previous therapy

   VS **T-DXd, DESTINY-Gastric02**

Cohort1 compared with T-DXd DESTINY-Gastric06

FS-1502 showed comparable efficacy and markedly better safety compared to ENHERTU.

- **Chinese patients with HER2-positive received ≥2 lines of previous therapy**

Response and Safety Assessment Comparison

	FS-1502 (LCB14)	T-DXd (ENHERTU)[1)]
Treatment	**2.3 mg/kg** IV, once every 3 weeks	**6.4 mg/kg** IV, once every 3 weeks
Enrolled patients, Data cut off	16pts, 2023-12-24	73 pts, 2023-06-16
Median duration of follow-up, months	10.1	8.0
Investigator-assessed ORR, (%)	**37.5%**	**35.6%** **28.8%** (ICR confirmed ORR)
Median PFS, months(95% CI)	**4.3** (1.5, 5.6)[2)]	**5.7** (4.0, 6.8)
Median OS, months(95% CI)	**10.0** (5.1 , -)	**10.2** (7.5, 14.3)
Median treatment duration, day (range)	112 (54-**171**)	102 (12-**435**)
ITT	N=46	N=95
Grade(G) ≥3 adverse events(AE), n(%)	**12 (26.1%)**	**70 (73.7%)**
Discontinued treatment due to AEs, n(%)	**0**	**12 (12.6%)**
Adjudicated drug-related ILD/pneumonitis, n (%)	To be updated	3 (3.2%)

1) Trastuzumab deruxtecan (T-DXd) DESTINY-Gastric06 (DG06) trial - Annals of Oncology
2) mPFS data is immature due to short treatment duration. Extended treatment with no patient discontinuations is expected to improve mPFS.

Cohort2 compared with T-DXd DESTINY-Gastric02

FS-1502 exhibited higher efficacy indicators compared to ENHERTU in ORR, DOR, and OS.

- **FS-1502 Cohort 2** : patients only received first-line of previous therapy
- **DESTINY-Gastric02 :** unresectable or metastatic gastric or gastro-oesophageal junction cancer, progressive disease on or after first-line therapy with a trastuzumab containing regimen

- **Response Assessment Comparison**

	FS-1502 (LCB14)	**T-DXd (ENHERTU)[1)]**
Treatment	**2.3mg/kg** IV, once every 3 weeks	**6.4mg/kg** IV, once every 3 weeks
Enrolled patients, Data cut off	19pts, 2023-12-24	79pts, 2021-11-08
Median duration of follow-up, months	12.5	10.2
ORR, (%)	**52.6%**	**42%**
Median DOR, months(95% CI)	**8.31** (2.2, -)	**8.1** (5.9 – NE)
Median OS, months(95% CI)	**14.6** (8.7 – NA)	**12.1** (9.4–15.4)
Median PFS, months(95% CI)	**4.4** (3.0 - 7.3) [2)]	**5.6** (4.2 – 8.3)
Median treatment duration, day (range)	112 (54-171)	129 (81–303)

1) (DESTINY-Gastric02): primary and updated analyses from a single-arm, phase 2 study (thelancet.com)
2) mPFS data is immature due to short treatment duration. Extended treatment with no patient discontinuations is expected to improve mPFS.

Cohort2 compared with T-DXd DESTINY-Gastric02

FS-1502 demonstrated a significantly superior safety profile over ENHERTU with lower serious AEs, no cases of discontinuation and death.

- **FS-1502 Cohort 2** : patients only received first-line of previous therapy
- **DESTINY-Gastric02 :** unresectable or metastatic gastric or gastro-oesophageal junction cancer, progressive disease on or after first-line therapy with a trastuzumab containing regimen

- **Safety Analysis Comparison**

	FS-1502 (LCB14)	T-DXd (ENHERTU)[1)]
Treatment	**2.3 mg/kg** IV, once every 3 weeks	**6.4 mg/kg** IV, once every 3 weeks
ITT	N=46	N=79
A treatment-emergent adverse event	To be updated	79 **(100%)**
Grade(G) ≥3 adverse events(AE), n(%)	**12 (26.1%)**	**44 (56%)**
Serious treatment-emergent adverse event	**6 (13%)**	**33 (42%)**
Drug related deaths	**0**	2 (3%), both due to ILD or pneumonitis
Discontinued treatment due to AEs, n(%)	**0**	15 (19%)
Dose reduction due to AEs, n(%)	4 (8.7%)	17 (22%)
Adjudicated drug-related ILD/pneumonitis, n (%)	To be updated	8 (10%)

1) (DESTINY-Gastric02): primary and updated analyses from a single-arm, phase 2 study (thelancet.com)

HER2 | ROR1

BC

GC

Multiple Solid

Lymphoma

ASCO 2024

CS5001(LCB71, FIC ROR1 ADC)

phase 1a/b preliminary result

compared to Zilovertamab vedotin (MK-2140)

The phase1a/b study evaluates the safety, pharmacokinetics (PK), and anti-tumor activity of CS5001 in patients with advanced solid tumors and lymphomas.

CS5001(LCB71) is a first-in-class ROR1 ADC utilizing LigaChem Biosciences' propriety ADC platform and PBD prodrug

- Development of a novel PBD prodrug and LBG linker by LigaChem Biosciences:
  - Overcomes toxicity issues of conventional PBDs.
  - High efficacy observed even at low doses.
  - Confirmed anti-cancer efficacy in solid tumors as well as lymphomas.

- Safety results
  - No dose-limiting toxicity (DLT) or maximum tolerated dose (MTD) was observed.
  - No cases of Grade 4-5 TRAEs, treatment discontinuation, or death.
  - Superior safety profile over competitors :
    Zilovertamab Vedotin showed 52% of Grade 4-5 TRAEs, 62% of discontinuation, and 2 deaths in WAVELINE-004.

- Efficacy results:
  - Diffuse large B-cell lymphoma (DLBCL) : Overall response rate (ORR) of 50.0% with 0.1 mg/kg.
  - Hodgkin lymphoma : ORR of 55.6% with 0.05 mg/kg.
  - Solid tumors: NSCLC (1 PR and 3 SDs), pancreatic cancer (1 PR), triple-negative breast cancer (1 SD), and ovarian cancer (1 SD) with 0.1 mg/kg and above. Based on the efficacy trends, more potent anti-tumor activity is expected as the dose increases.
  - High efficacy compared to competitors:
    Zilovertamab Vedotin indicated 29% ORR in DLBCL and 32% ORR in Non-Hodgkin lymphoma with 2.5mg/kg

Efficacy comparison

CS5001 showed a **superior overall response rate (ORR) in various hematological indications** compared to Zilovertamab Vedotin and tumor-suppressive activities in solid tumors even with the use of a PBD payload.

	CS5001(LCB71)	Zilovertamab Vedotin (MK-2140)
Diffuse Large B-Cell Lymphoma (DLBCL)	**50.0%** of ORR Q3W, 0.1 mg/kg and above	**29%** of ORR [1)] Q3W, 2.5 mg/kg
Hodgkin Lymphoma	**55.6%** of ORR Q3W, 0.05 mg/kg and above	-
Non-Hodgkin Lymphoma	-	**32%** of ORR [2)] Q3W, 2.5 mg/kg
Solid Tumors	**NSCLC (1 PR and 3 SDs), Pancreatic cancer (1 PR)** Triple-negative breast cancer (1 SD), Ovarian cancer (1 SD) Q3W, 0.1 mg/kg and above	**No result posted** [3)] after Phase2 completion

1) Zilovertamab Vedotin (MK-2140) in Relapsed or Refractory Diffuse Large B-Cell Lymphoma (DLBCL): Updated Results from the Phase 2 Waveline-004 Study (confex.com)
2) ZILOVERTAMAB VEDOTIN (MK-2140) IN RELAPSED OR REFRACTORY (R/R) NON-HODGKIN LYMPHOMA (NHL): UPDATED RESULTS FROM THE PHASE 1 WAVELINE-001 STUDY - PMC (nih.gov)
3) A Study of Zilovertamab Vedotin (MK-2140) (VLS-101) in Participants With Solid Tumors (MK-2140-002) - No Study Results Posted - ClinicalTrials.gov

Safety comparison

CS5001 demonstrated a **notably higher safety profile** for serious adverse events. **No DLT** was observed, and the **MTD was not reached** at the highest dose level with **no cases** of **Grade 4-5 TRAEs, treatment discontinuation or death**.

	CS5001 (LCB71) phase 1a/b, N=49	**Zilovertamab Vedotin (MK-2140)**	
		R/R DLBCL WAVELINE-004 Phase2, N=98 [1)]	**R/R NHL WAVELINE-001 Phase1, N=56** [2)]
Treatment	Q3W, 7-125μg/kg	Q3W 2.5 mg/kg	Q3W 0.5~2.5mg/kg
Treatment-related adverse event (TRAE)	59.2%	80%	73%
Grade ≥3 treatment-related AEs	14.3%	52%	48%
Grade 4-5 TRAEs	**0**	unknown	unknown
Discontinuation (%)	**0%** No DLT observed and MTD was not reached	62%	21%
Death (Pts)	**0**	2	0

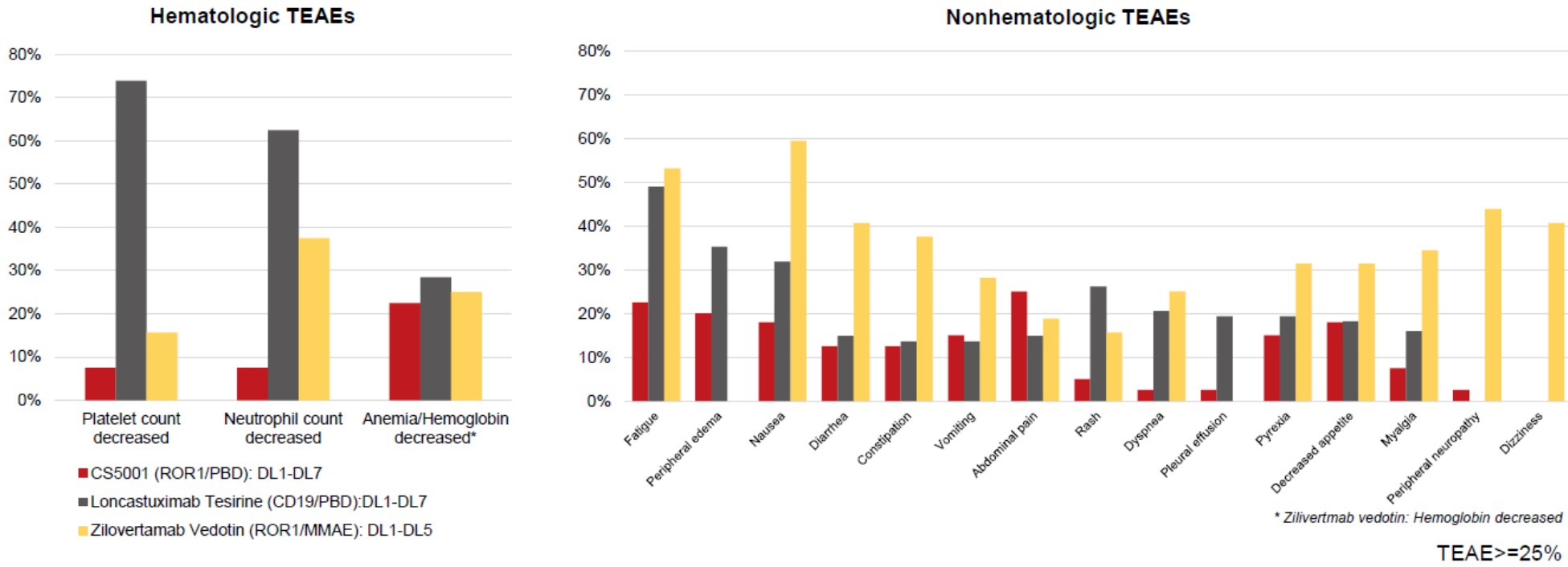
1) Zilovertamab Vedotin (MK-2140) in Relapsed or Refractory Diffuse Large B-Cell Lymphoma (DLBCL): Updated Results from the Phase 2 Waveline-004 Study (confex.com)

2) ZILOVERTAMAB VEDOTIN (MK-2140) IN RELAPSED OR REFRACTORY (R/R) NON-HODGKIN LYMPHOMA (NHL): UPDATED RESULTS FROM THE PHASE 1 WAVELINE-001 STUDY - PMC (nih.gov)

Safety comparison

Favorable phase 1 safety profile of CS5001 vs. two other relevant ADCs

Lower frequency of hematologic and nonhematologic AEs observed for CS5001 up to Dose Level 7



Wang ML, et al.NEJM Evidence. DOI: 10.1056/EVIDoa2100001; Brad S Kahl 1, Clin Cancer Res. doi: 10.1158/1078-0432.CCR-19-0711.

Resources : CStone Business Update 2023.12.20

Thank You!

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