



2023 WuXi AppTec Investor Day

WuXi ATU: A Global CTDMO Platform

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CEO of WuXi ATU

Forward-Looking Statements

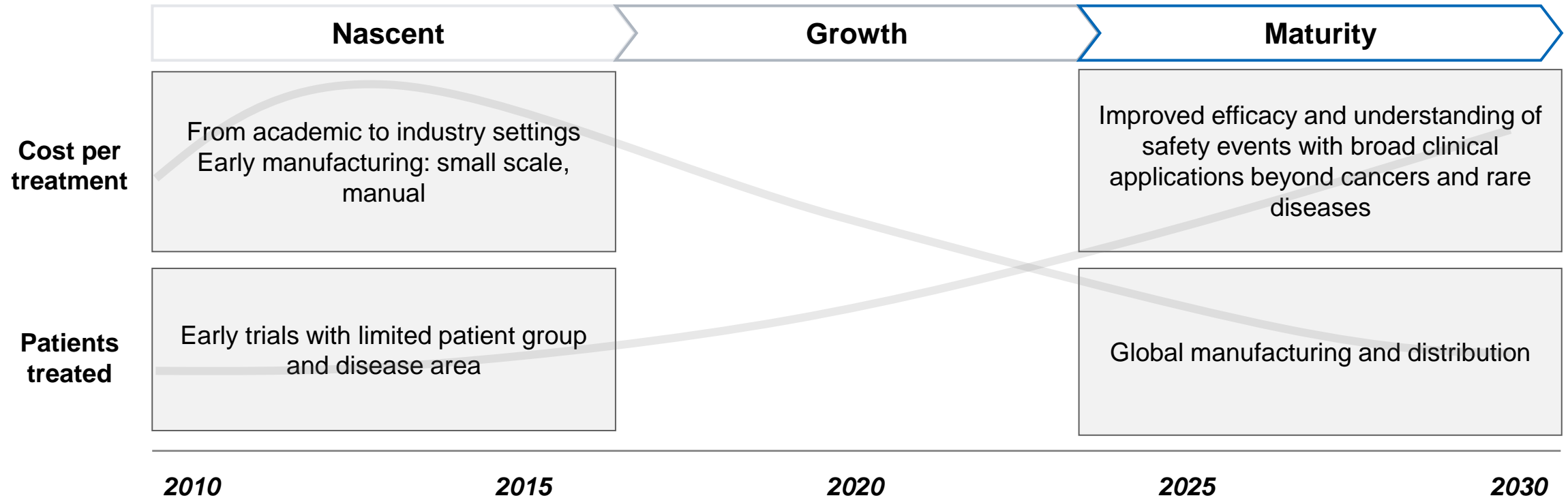
This presentation may contain certain “forward-looking statements” which are not historical facts, but instead are predictions about future events based on our beliefs as well as assumptions made by and information currently available to our management. Although we believe that our predictions are reasonable, future events are inherently uncertain and our forward-looking statements may turn out to be incorrect. Our forward-looking statements are subject to risks relating to, among other things, the ability of our service offerings to compete effectively, our ability to meet timelines for the expansion of our service offerings, our ability to protect our clients’ intellectual property, unforeseeable international tension, competition, the impact of emergencies and other force majeure. Our forward-looking statements in this presentation speak only as of the date on which they are made, and we assume no obligation to update any forward-looking statements except as required by applicable law or listing rules. Accordingly, you are strongly cautioned that reliance on any forward-looking statements involves known and unknown risks and uncertainties. All forward-looking statements contained herein are qualified by reference to the cautionary statements set forth in this section. All information provided in this presentation is as of the date of this presentation and are based on assumptions that we believe to be reasonable as of this date, and we do not undertake any obligation to update any forward-looking statement, except as required under applicable law.

Non-IFRS Financial Measures

We provide non-IFRS gross profit and non-IFRS net profit attributable to owners of the Company, which exclude share-based compensation expenses, listing expenses and issuance expenses of convertible bonds, fair value gain or loss from derivative component of convertible bonds, foreign exchange-related gains or losses and amortization of intangible assets acquired in business combinations, non-financial assets impairment, etc. We also provide adjusted non-IFRS net profit attributable to owners of the Company and earnings per share, which further exclude realized and unrealized gains or losses from our venture capital investments and joint ventures. Neither of above is required by, or presented in accordance with IFRS.

We believe that the adjusted financial measures used in this presentation are useful for understanding and assessing our core business performance and operating trends, and we believe that management and investors may benefit from referring to these adjusted financial measures in assessing our financial performance by eliminating the impact of certain unusual, non-recurring, non-cash and non-operating items that we do not consider indicative of the performance of our core business. Such non-IFRS financial measures, the management of the Company believes, is widely accepted and adopted in the industry the Company is operating in. However, the presentation of these adjusted non-IFRS financial measures is not intended to be considered in isolation or as a substitute for the financial information prepared and presented in accordance with IFRS. You should not view adjusted results on a stand-alone basis or as a substitute for results under IFRS, or as being comparable to results reported or forecasted by other companies.

Cell and Gene Therapy is a New Frontier in Medicine with a Potential to Provide Curative Medicines for Patients



Cell therapy



Use of living (modified or unmodified) cells to boost immunoreaction, repair, replace, or regenerate damaged tissue or treat diseases

Gene therapy

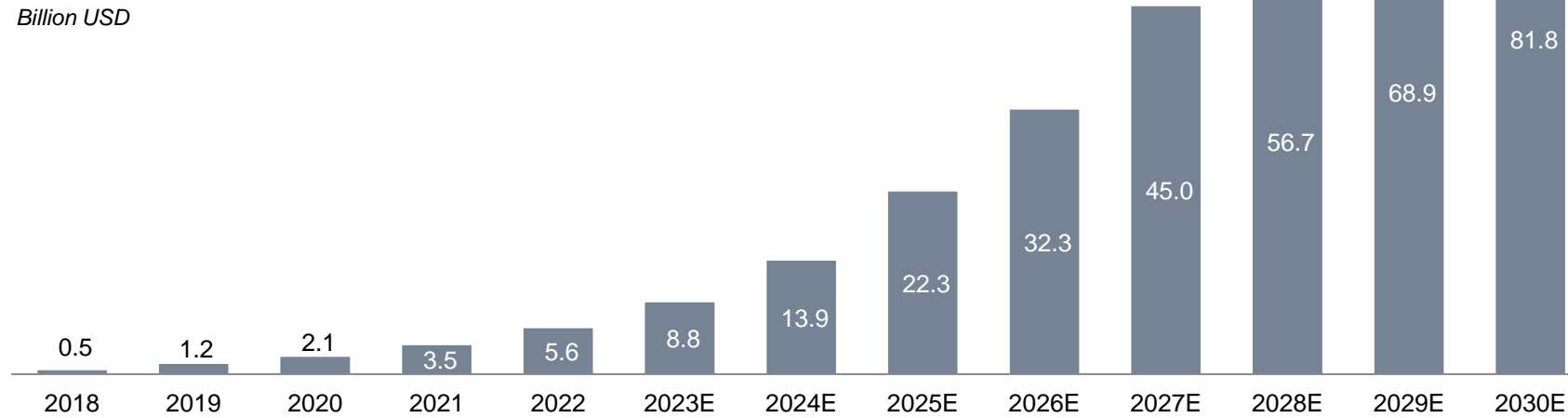


Introduction, removal, or alteration of genetic material within patients to treat or prevent disease.

Outlook of Cell & Gene Therapy Market Size

Historical and Forecasted Market Size of Global CGT Market, 2018-2030E

Period	CAGR
2018-2022	86.6%
2022-2026E	54.9%
2026E-2030E	26.1%

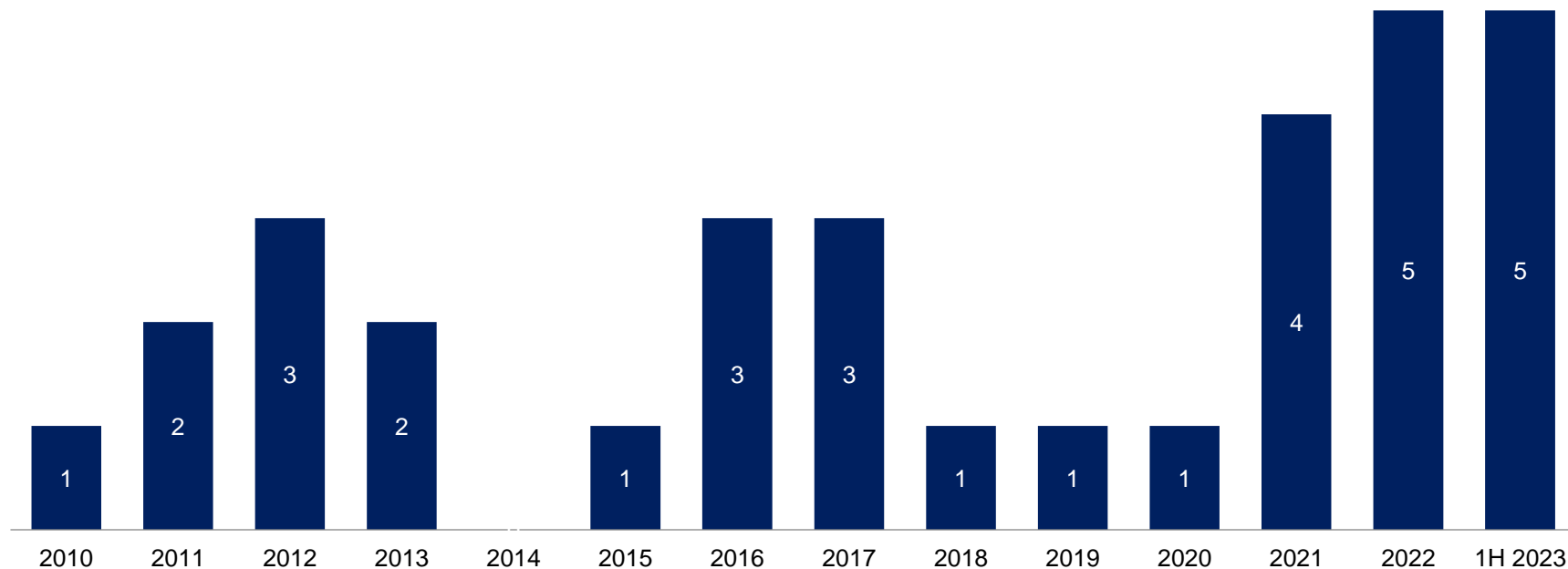


Source: Frost & Sullivan analysis

FDA Approval of Cell and Gene Therapy Products are Growing

- As of 1H 2023, there are total 32 FDA-approved cell and gene therapies. It is expected that cell and gene therapy will make big advances in the next few years, especially for diseases with short-term mortality in the next 5 to 10 years.

FDA Approved Cell and Gene Therapies, 2010-1H 2023

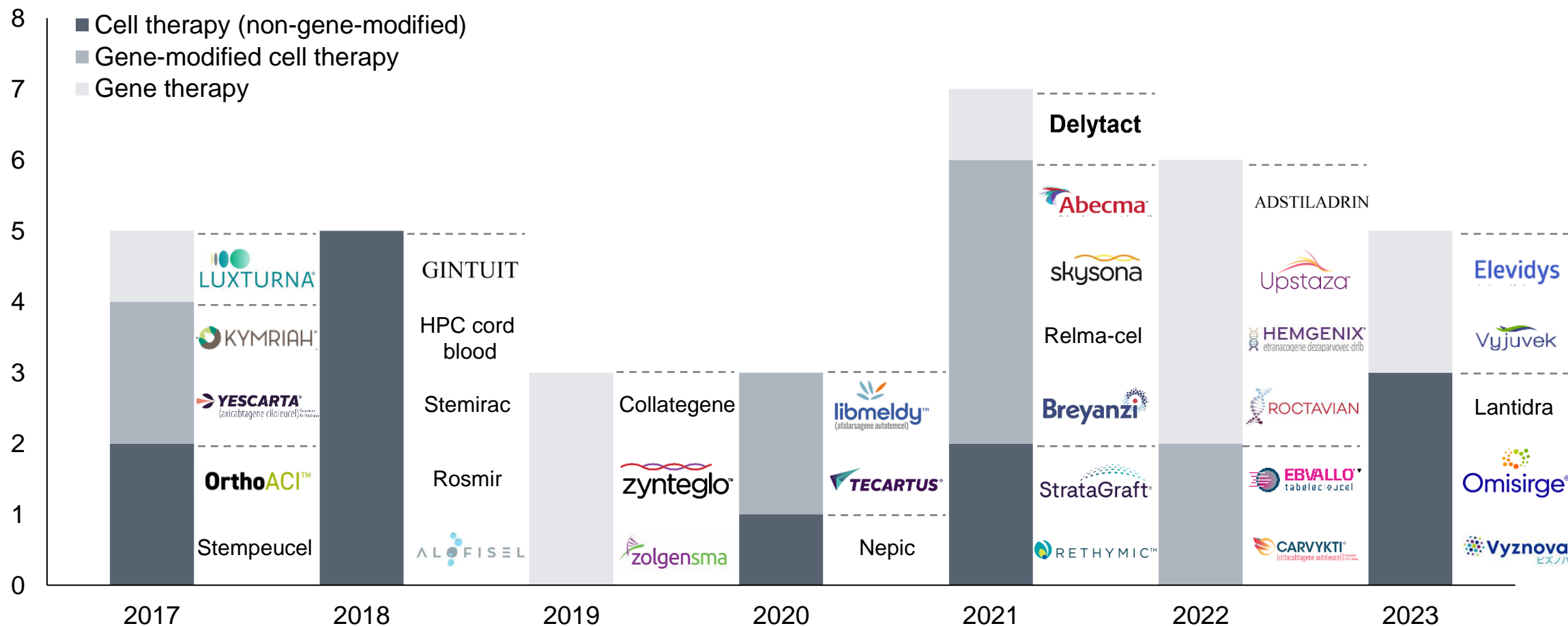


*As of 2023/6/30

Source: FDA, Frost & Sullivan analysis

Globally since 2017, a Total of 34 CGT Therapies Have Received Their First-time Approval

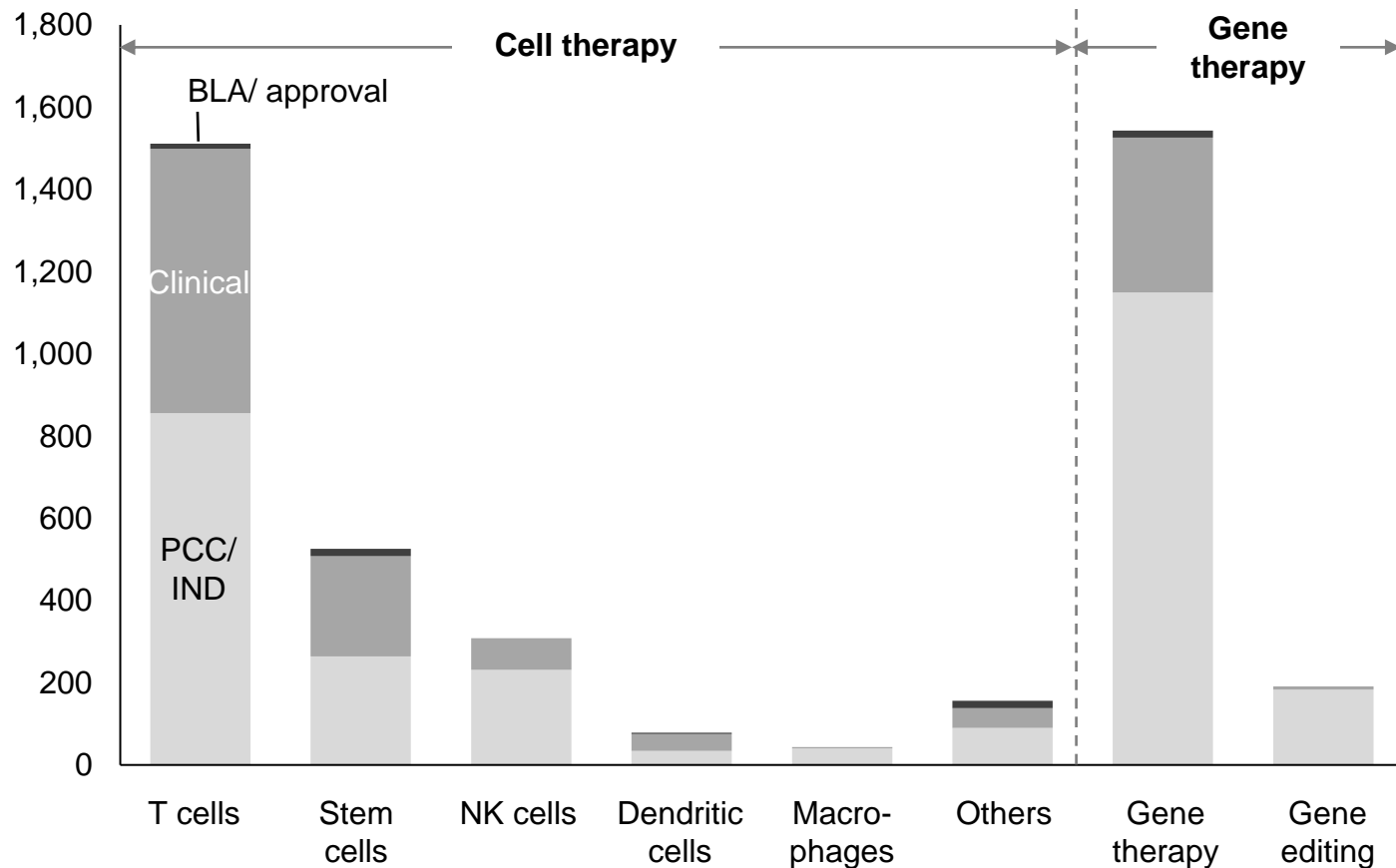
CGT drugs which obtained 1st time approval, including approvals from ex-US regulatory authorities since 2017



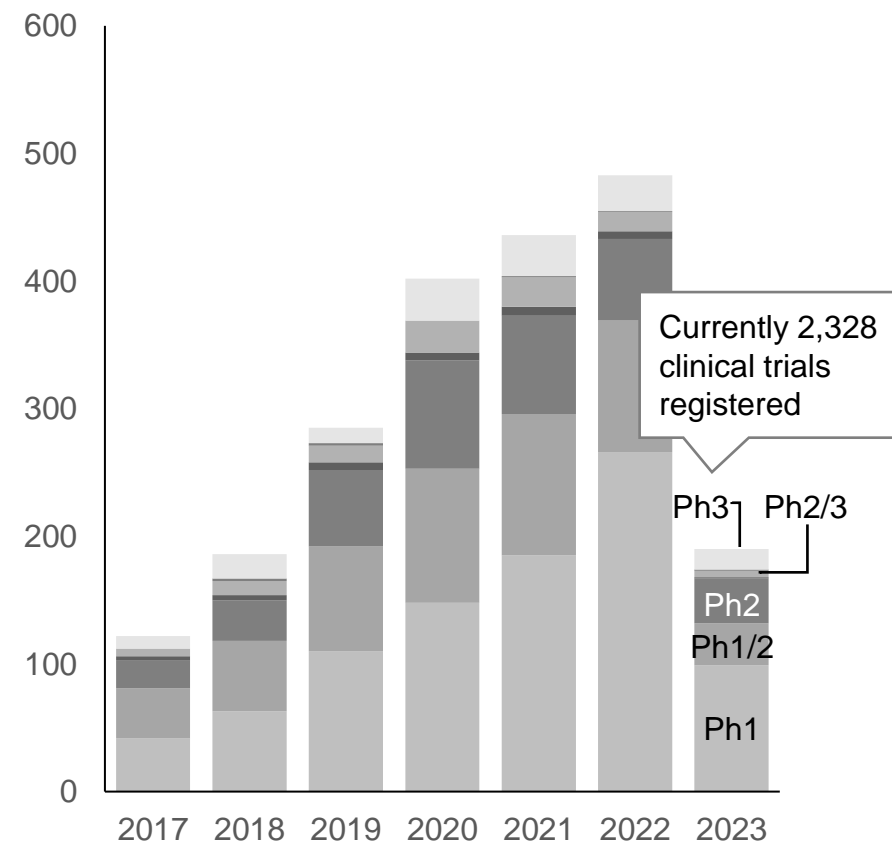
Source: Public information

Over 4,000 Clinical and Preclinical Pipelines are Under Investigation, with Growing New Registered Clinical Trials Every Year

Number of pipelines (PCC and clinical) in study by category



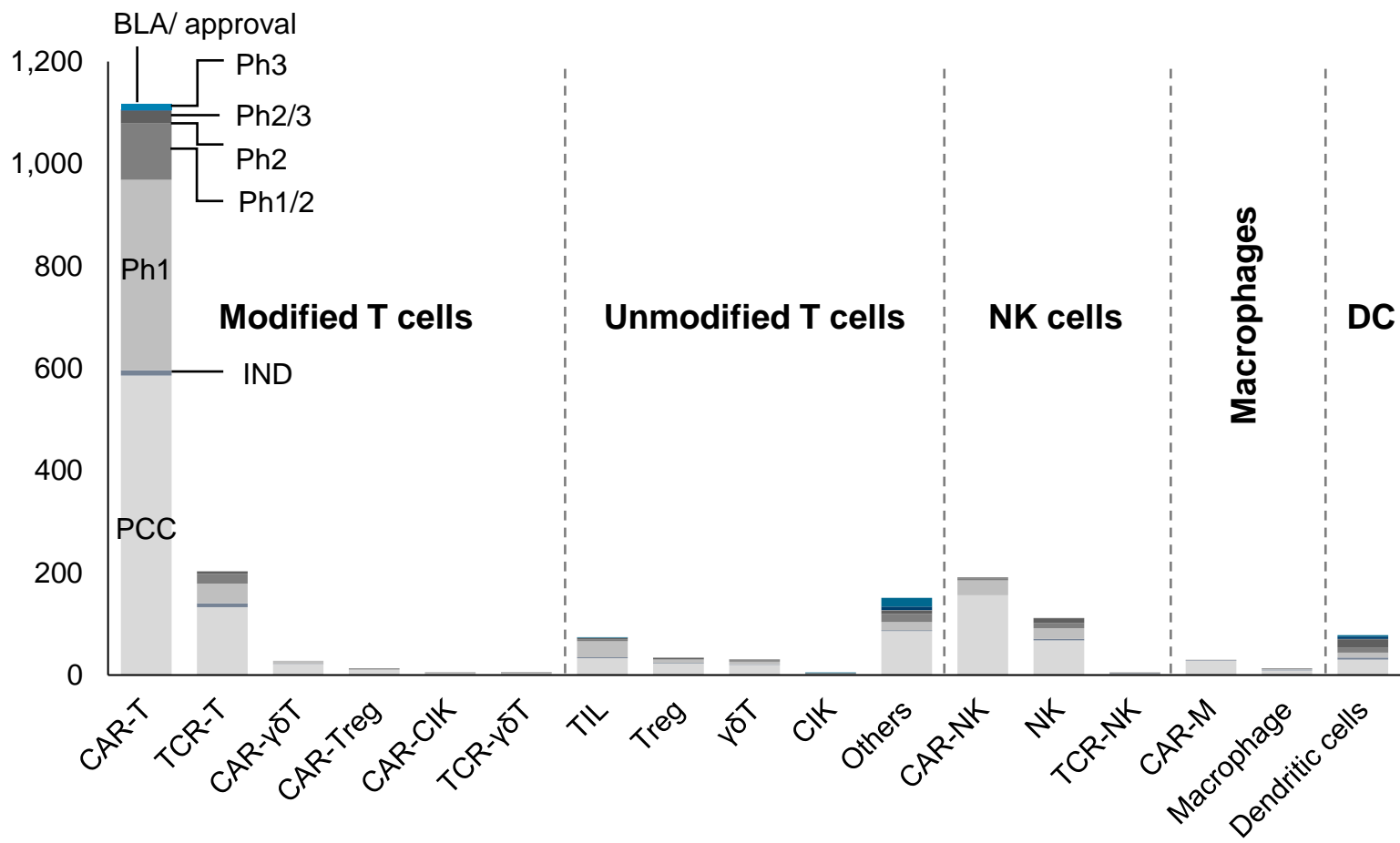
Number of new clinical CGT trials by year



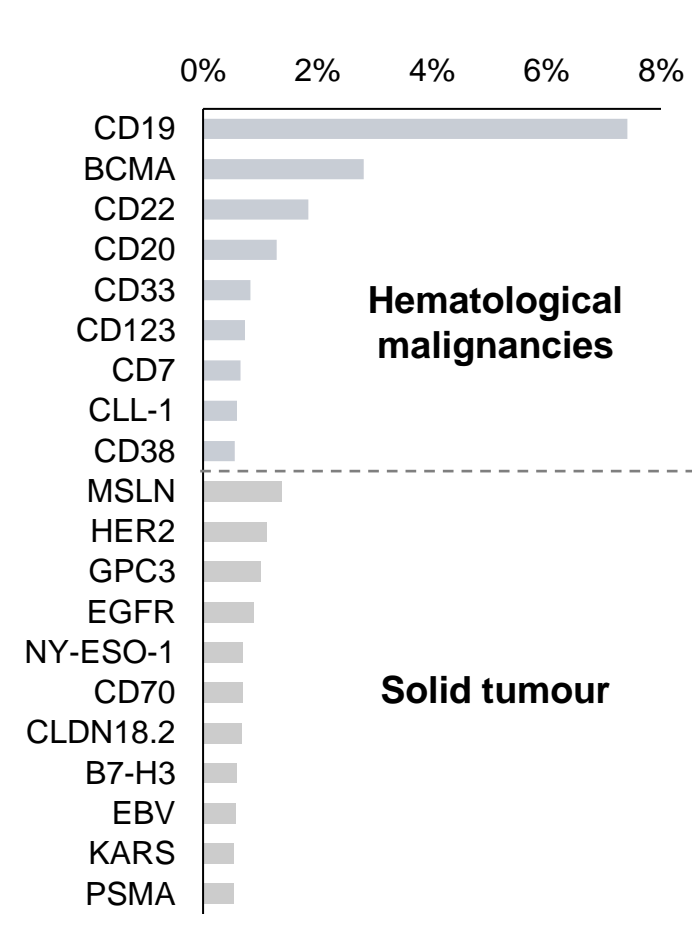
Source: PharmCube NextPharma database; Date cutoff 06/2023; ASGCT

Cell therapy: CAR-T is by far the Most Popular Modality Currently Focused on Hematological Malignancies, Solid Tumor Targets and Autoimmune Disease Targets are also being Pursued

Cell therapy pipeline breakdown by cell type and phase



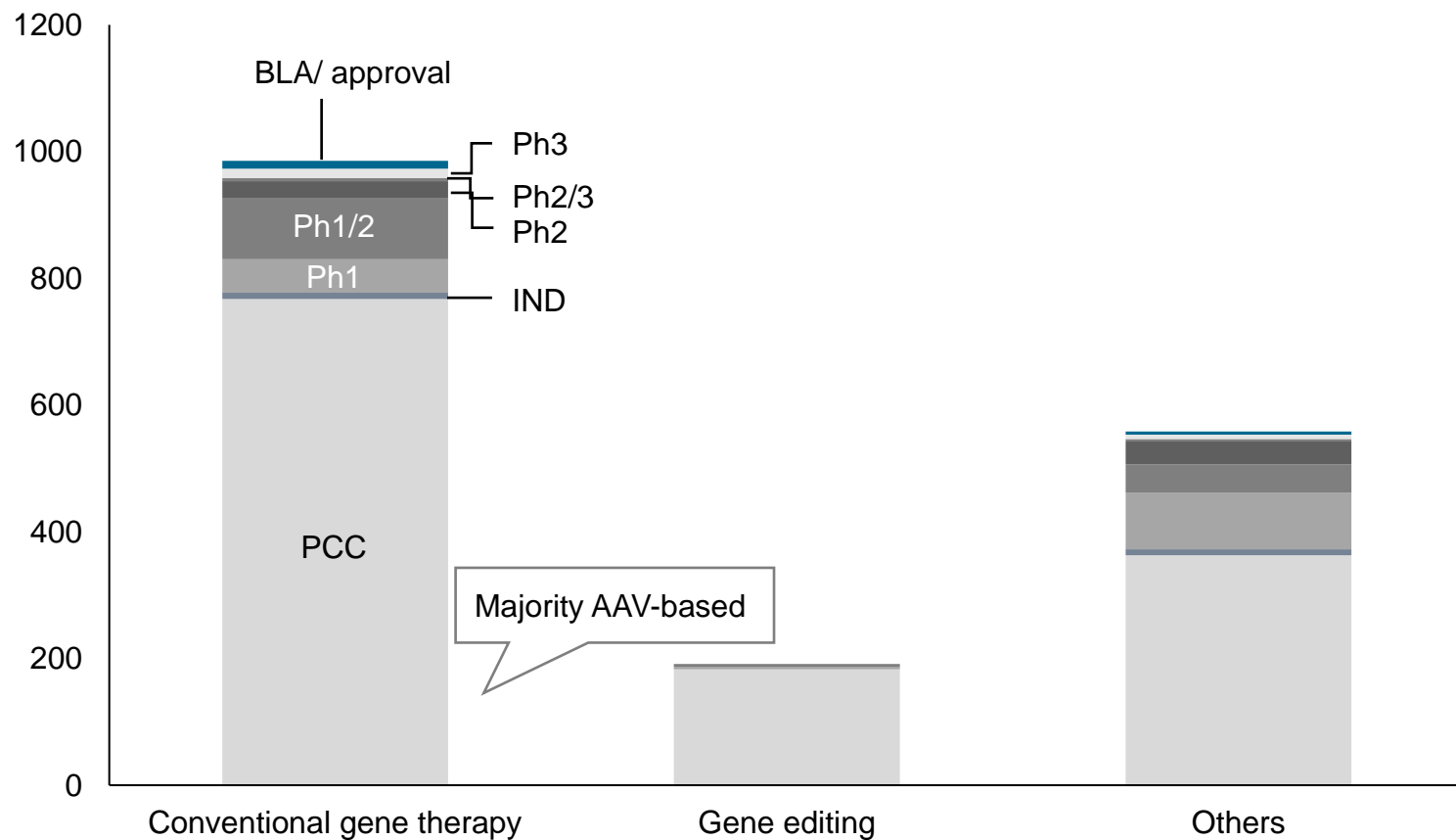
Pipeline breakdown by target



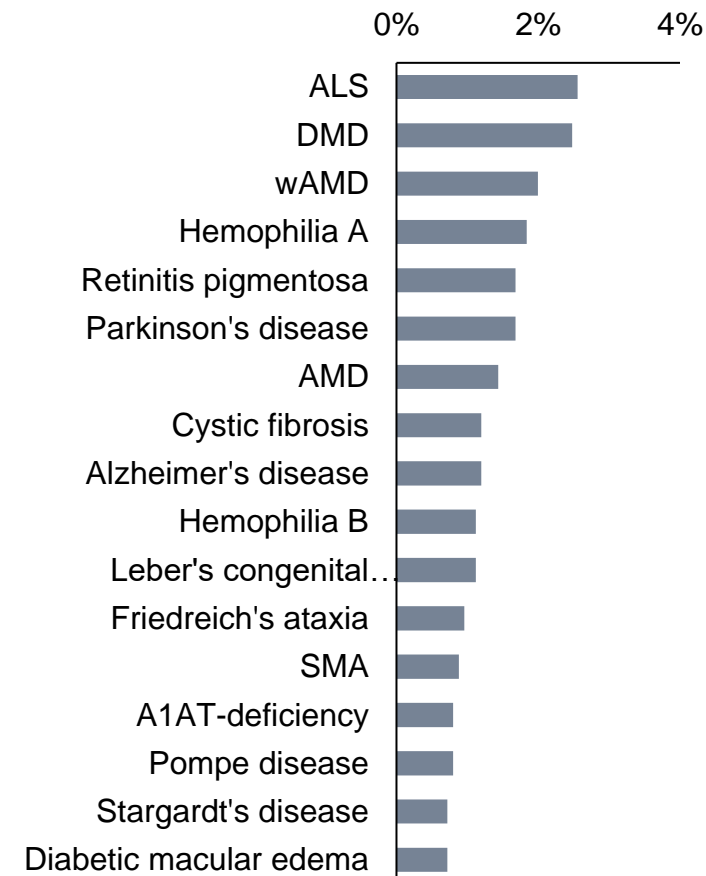
Source: PharmCube NextPharma database; Date cutoff 05/2023

Gene therapy: AAV is by far the Most Popular Gene Delivery Vehicle; Rare Diseases and Retinal Diseases are Common Targeted Indications

Gene therapy pipeline breakdown by cell type and phase



Pipeline breakdown by indication



Source: PharmCube NextPharma database; Date cutoff 05/2023

Future Outlook: Pipeline Products Pending Approval in Near Future will be a Key Driver for Future Sales Growth

Gene therapy & gene editing

B-Vec (HSV-1)
Krystal Bio

SRP-9001 (AAV)
Sarepta Therapeutics

Roctavian (AAV)
BioMarin

Lumevoq (AAV)
GenSight

bb1111 (lentivirus)
Bluebird Bio

EtranaDez* (AAV)
uniQure & CSL Behring

Upstaza (AAV)
PTC Therapeutics

Fidanacogene elaparvovec (AAV)
Pfizer

CTX-001 (ex vivo CRISPR/Cas)
CRISPR & Vertex

Cell therapy

Omidubicel (allogenic HSC)
Gamida Cell

Lantidra (pancreatic islet cells)
CellTrans

NurOwn (MSC)
BrainStorm

Libmeldy (autologous HSC)
Orchard Therapeutics

HPC cord blood (UCB HPC)
StemCyte

SB623 (MSC)
Sumitomo Pharma

ACE-02 (autologous epidermis)
J-TEC

Lifileucel (TIL)
Iovance

Tab-Cel (allogeneic T-cell)
Atara Bio

Afami-cel (TCR-T)
Adaptimmune Therapeutics

CT-053 (CAR-T)
CARsgen Therapeutics

Inaticabtagene autoleucel (CAR-T)
Juventas

Legend

Approved by FDA in 2023

Pending approval

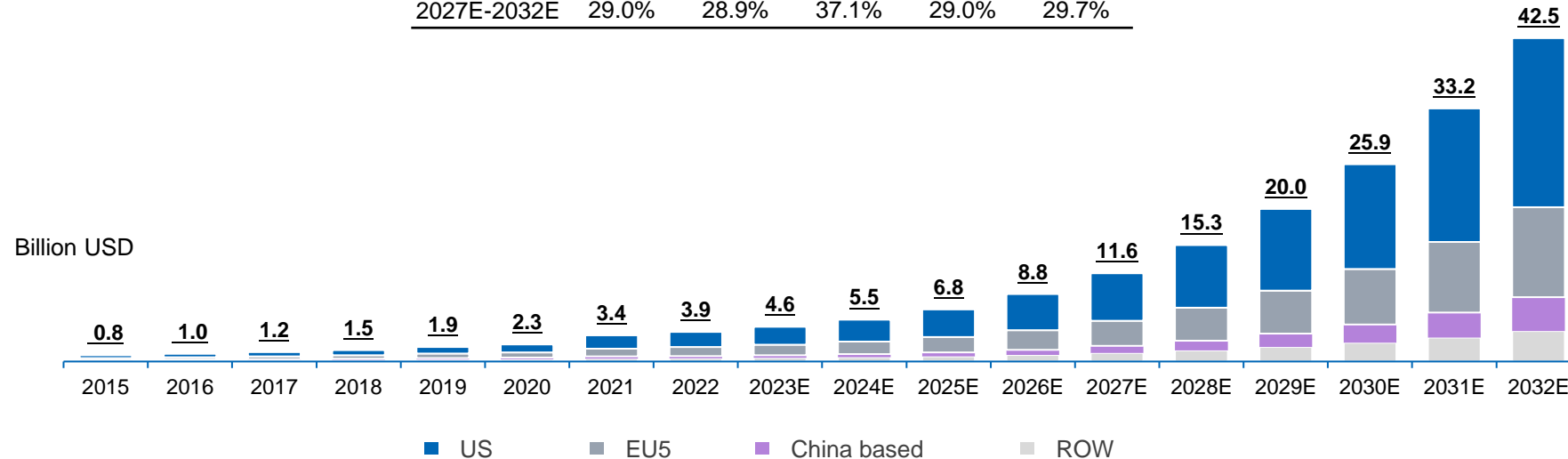
Note: *Approved by FDA in 2022 under the name of Hemgenix; pending EU approval
Source: The Alliance for Regenerative Medicine, public information

Historical and Forecasted Global Market Size of Cell and Gene Therapy CDMO, 2015-2032E

- Global cell and gene therapy CDMO services market increases from USD0.8 billion in 2015 to USD3.9 billion in 2022 with a CAGR of 24.6%. The market will continue to grow to USD11.6 billion by 2027 with a CAGR of 24.4% from 2022 to 2027. It's expected to reach USD42.5 billion in 2032 with a CAGR of 29.7% from 2027 to 2032.

Historical and Forecasted Global Market Size of Cell and Gene Therapy CMO/CDMO, 2015-2032E

Period	US	EU5	China based	ROW	Total
2015-2022	27.1%	23.3%	25.9%	18.2%	24.6%
2022-2027E	25.5%	23.2%	24.7%	21.8%	24.4%
2027E-2032E	29.0%	28.9%	37.1%	29.0%	29.7%

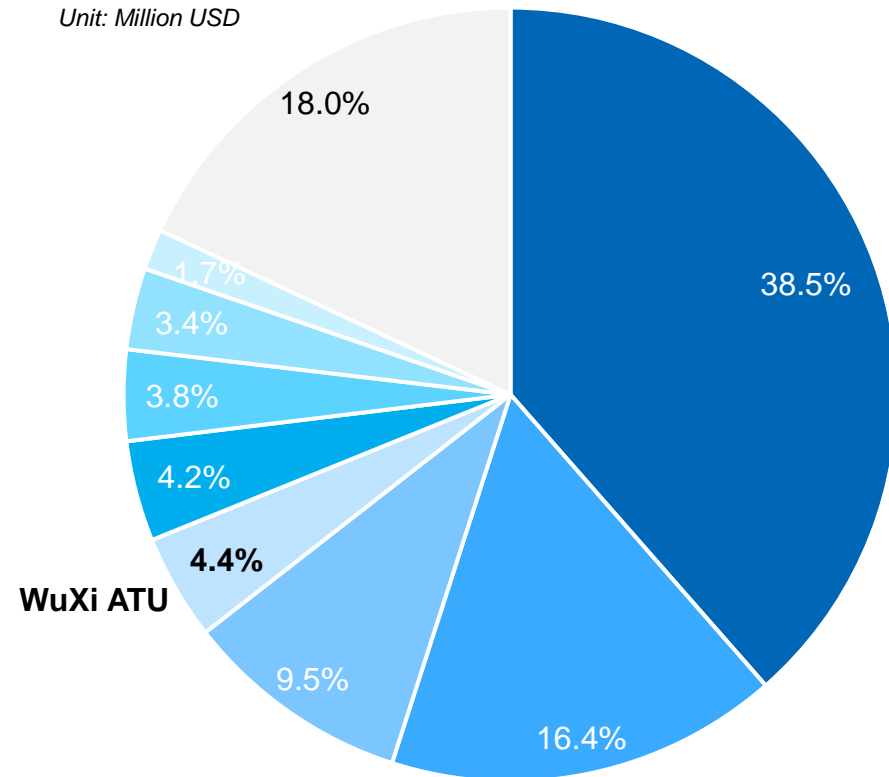


Note: Cell and Gene Therapies include mRNA and its plasmid, but oligonucleotides or Gene detection are not included.

Source: Frost & Sullivan analysis

Global Competitive Landscape of CGT CDMO Market Players 2022

Global Competitive Landscape of WuXi AppTec – WuXi ATU Corresponding Service Market Players, 2022



Company	Revenue	Market Share
Company A	1,701.1	38.5%
Company B	725.7	16.4%
Company C	418.8	9.5%
WuXi ATU	194.4	4.4%
Company E	187.0	4.2%
Company F	166.2	3.8%
Company G	152.5	3.4%
Company H	76.9	1.7%
All Others	797.1	18.0%

Sources: Frost & Sullivan Analysis

WuXi ATU – A Globally Integrated CTDMO

“Enabling DNA to BLA”



Three business engines fueled by global platforms

Advanced technologies, manufacturing and testing solutions for cell and gene therapy innovators

Viral Vectors

AAV | LVV | HSV | Adeno | Plasmids

Cell Therapies

CAR-T | TIL | MSC

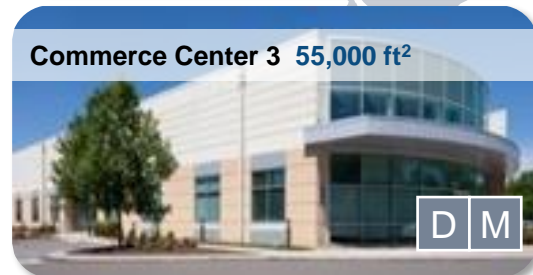
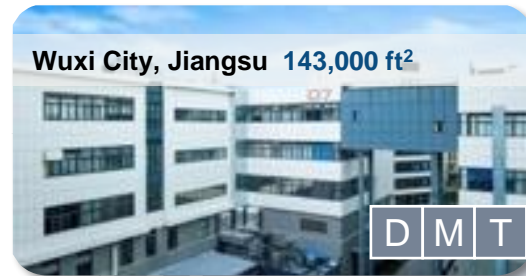
Testing

Integrated and standalone advanced therapy and biologics testing

4 sites across 3 continents | 75k+ square meters facilities | 1,200+ employees

2500+ cell therapy GMP lots released

Global Sites of WuXi ATU



Research
Testing
Development
Manufacturing

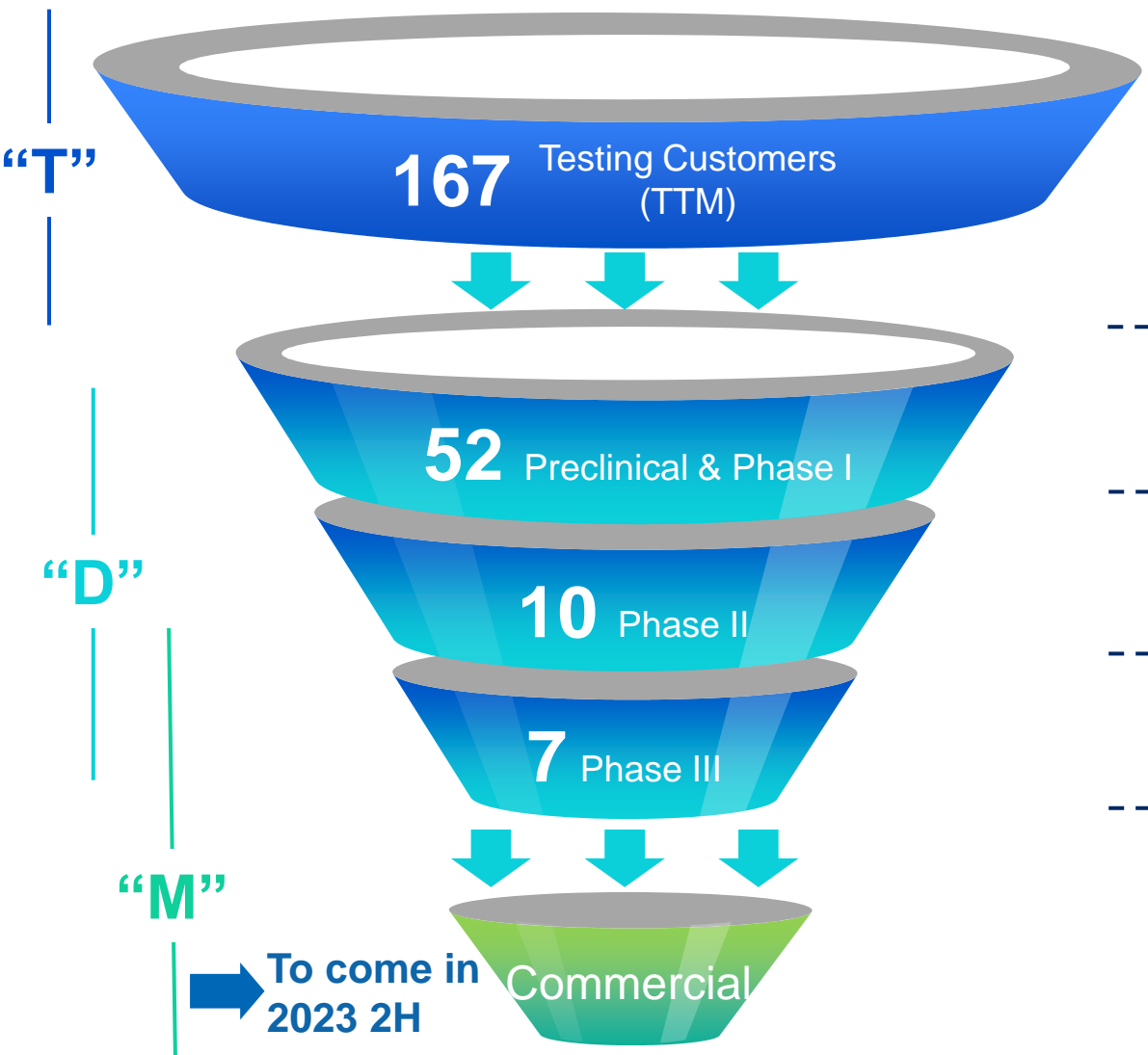
WuXi ATU Philadelphia Campus



Over 400,000 sq ft

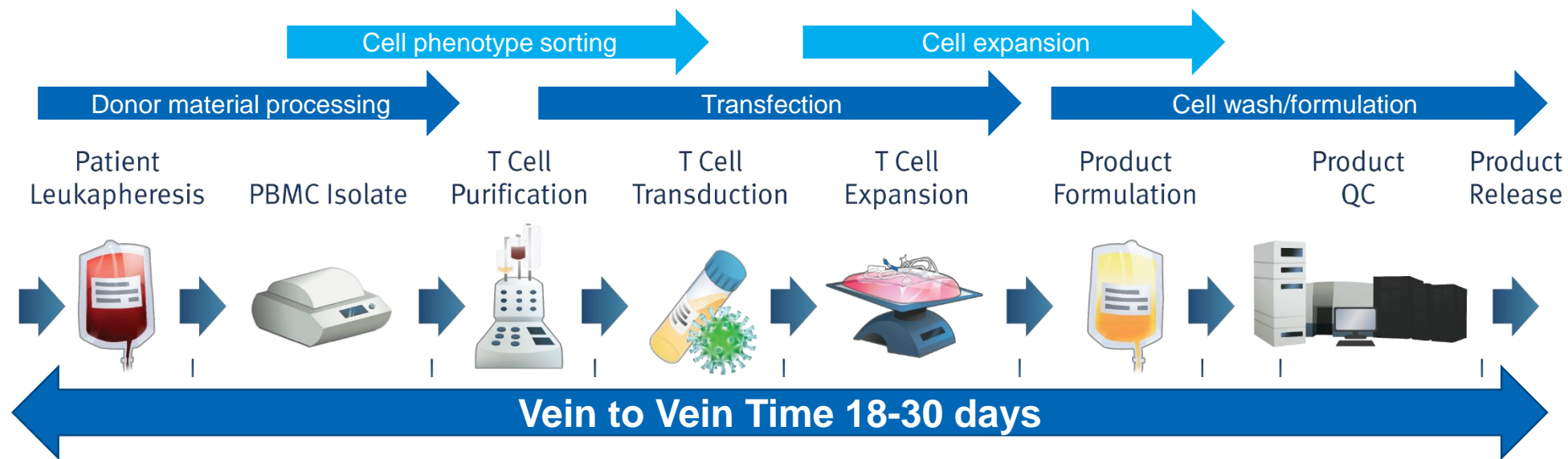
Global Compliance – Comprehensive Quality System – Integrated Testing and Manufacturing Operations

Expanding CTDMO Pipeline Drives Strong Growth Ahead



Autologous CAR-T	Allo-genic CAR-T	In-vivo CAR-T	Allograft Cell Therapy	TIL	Viral Vector	Others
17	9	7	1	2	12	4
5	2			2		1
2			3	1	1	

Complex CGT Products Requires Sophisticated Testing, Development and Manufacturing all under One Roof for Efficiency, Reliability and Cost

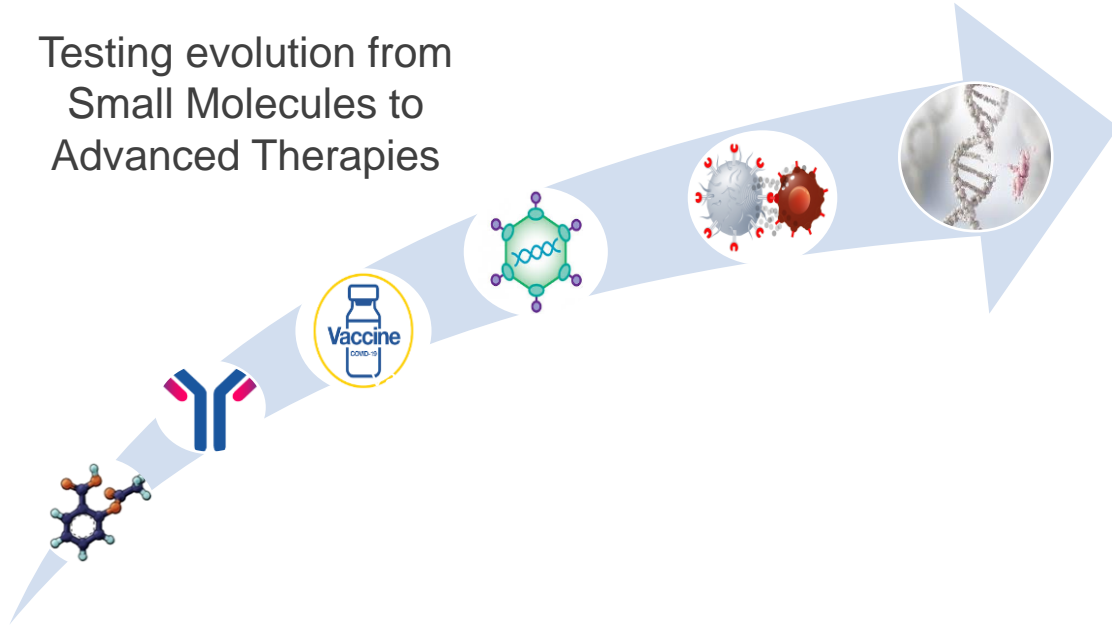


Our CTDMO platform offers customers:

- / One stop service for integrated development, manufacturing and testing that ensures **vein-to-vein timeline** for patients.
- / Strong regulatory and technical expertise, with dedicated process and analytical development teams
- / In-stock raw materials and consumables with established batch records and testing protocols
- / Full in-process and release testing, plus complete quality control and characterization services
- / Support customers from IND to BLA to commercialization

Testing Poses Complexity and Challenges to the CGT Industry

Testing evolution from
Small Molecules to
Advanced Therapies



Testing Platforms for CAR-T Products

Product specific release tests:

- CAR Expression by Flow Cytometry
- Integrated Copy Number (GOI specific)

General characteristics:

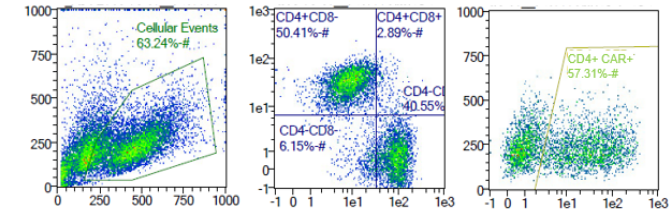
- Cell Count and Viability by NC-200
- Identity by Flow Cytometry
- Cellular Impurities by Flow Cytometry

Safety Testing:

- Sterility, Endotoxin, Mycoplasma
- Replication Competent Virus

Additional Capabilities (as needed):

- Potency Assays (product specific)
- T-cell Memory Phenotype by Flow Cytometry
- T-Cell Activation by Flow Cytometry
- T-Cell Exhaustion by Flow Cytometry
- In Vitro and PCR based adventitious agents
- Residual Viral DNA



- Small Molecule Testing

- Simple chemical/physical characterization
- Conventional instruments in traditional QC labs

- Advanced Therapy Testing

- Complex biologics, viral and cell characterization
- Advanced instrumentation in development labs
- Broadly used cell based assays (potency assays)

WuXi ATU Manufacturing Platform Roadmap

**Defining CGT Future
Manufacturing Standard to
Drive Down Cost**

Automate & Scale Up

Collaborating with automation companies to develop fully automated cell manufacturing system

Innovate & Create

ATU internally develops closed system for cell manufacturing

Improve & Optimize

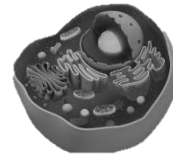
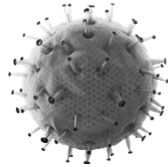
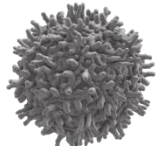
Clients' process transferred to ATU and ATU improve and optimize the process for GMP manufacturing & testing



- Drove down mfg cost by 40% for a cell therapy product from clinical scale to commercial scale mfg
- For a viral vector product, reduced mfg cost by >50%
- Using TESSA technology, we can drive down AAV mfg cost by 10 folds per dose

Manufacturing Platforms for CGT

Improve & optimize industry standard manufacturing platforms



WuXi ATU Platform

Triple Transfection Platform

4-Plasmid Transfection Platform

Cell Therapy Manufacturing Platforms



R&D Objective

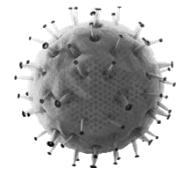
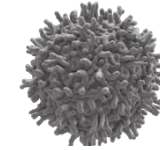
Improve the plasmids, cell line and process, whilst standardizing the platform

Improve processes to increase yield and activity

R&D Outcome

Industry-leading manufacturing performance with current industry standard platforms

Innovate & create new CGT manufacturing platforms



TESSA™ Technology for AAV Vectors

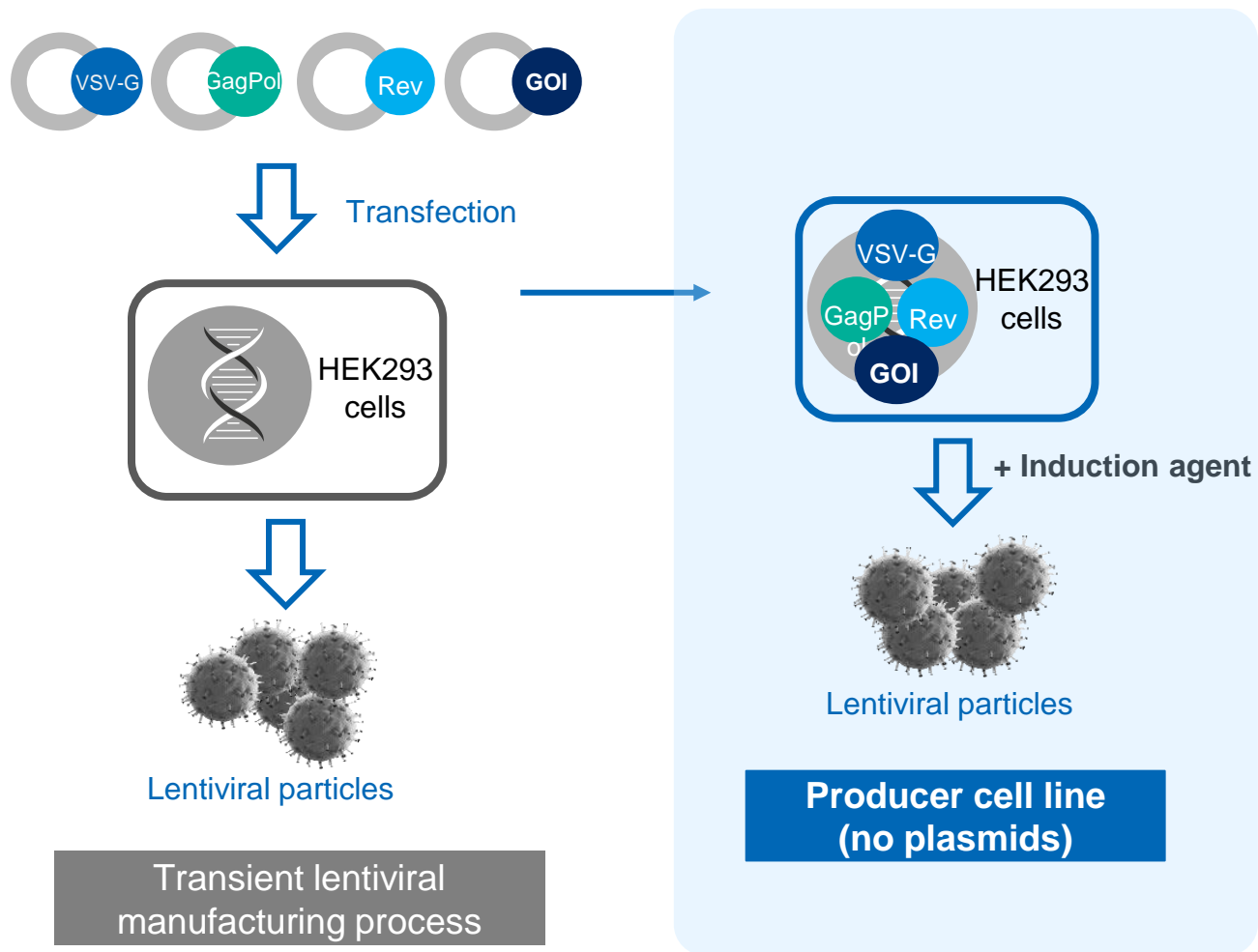
Lenti VV Stable Cell Line for Lentiviral Vectors



Validate new technologies at scale and support customers transition to new platforms

Transforming manufacturing performance with innovative new platforms

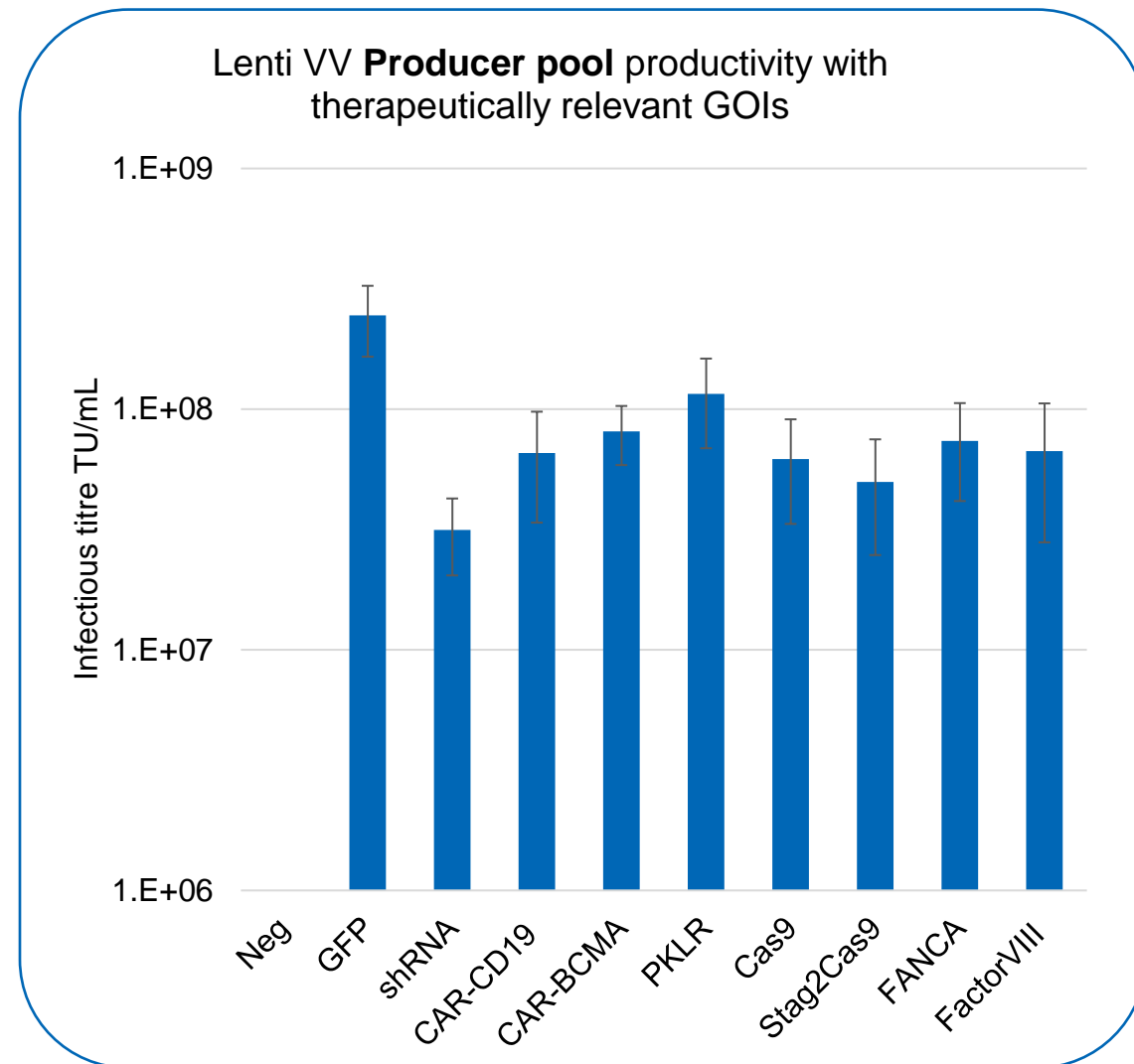
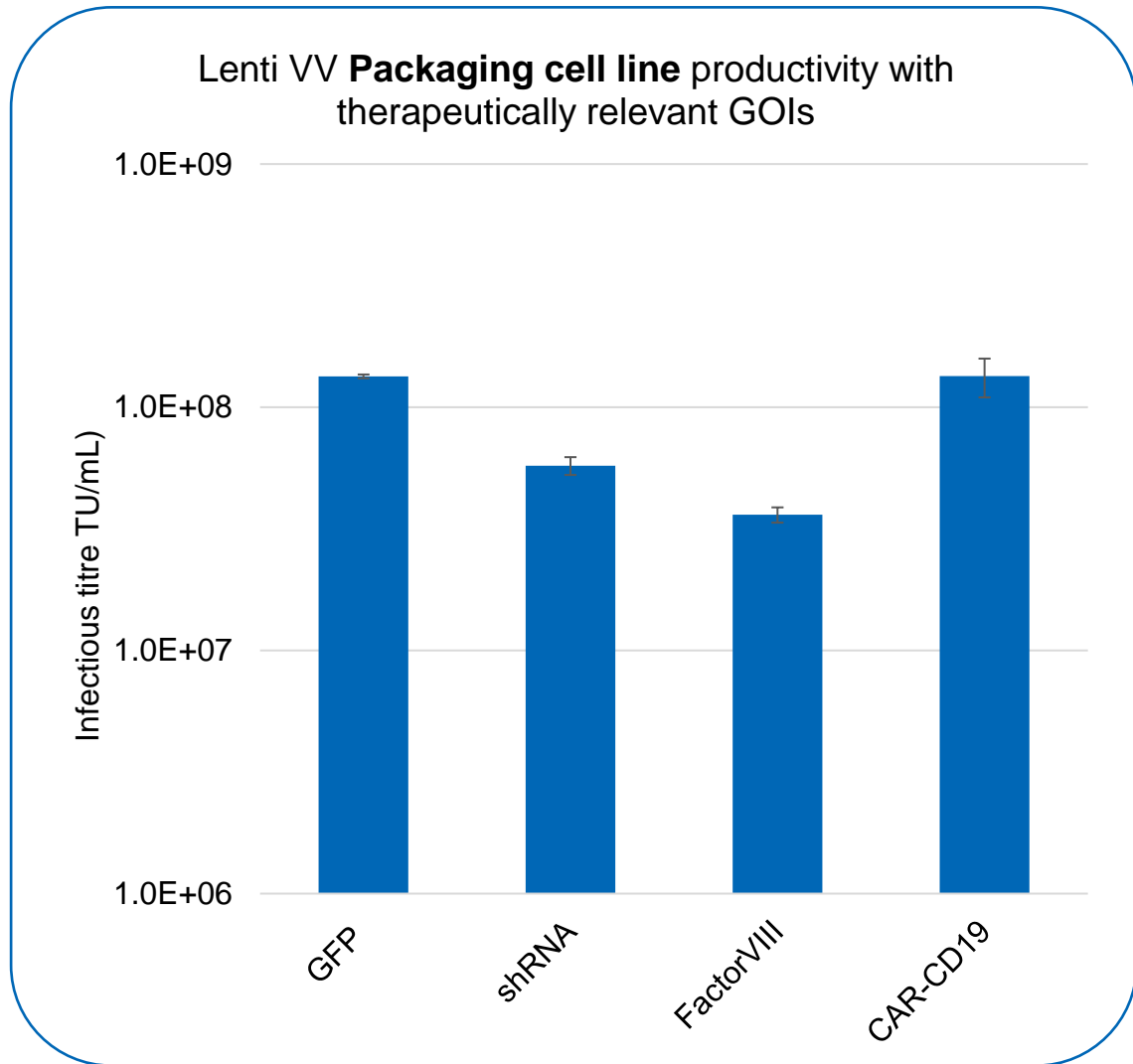
Innovate Lenti Viral Vector Stable Technology



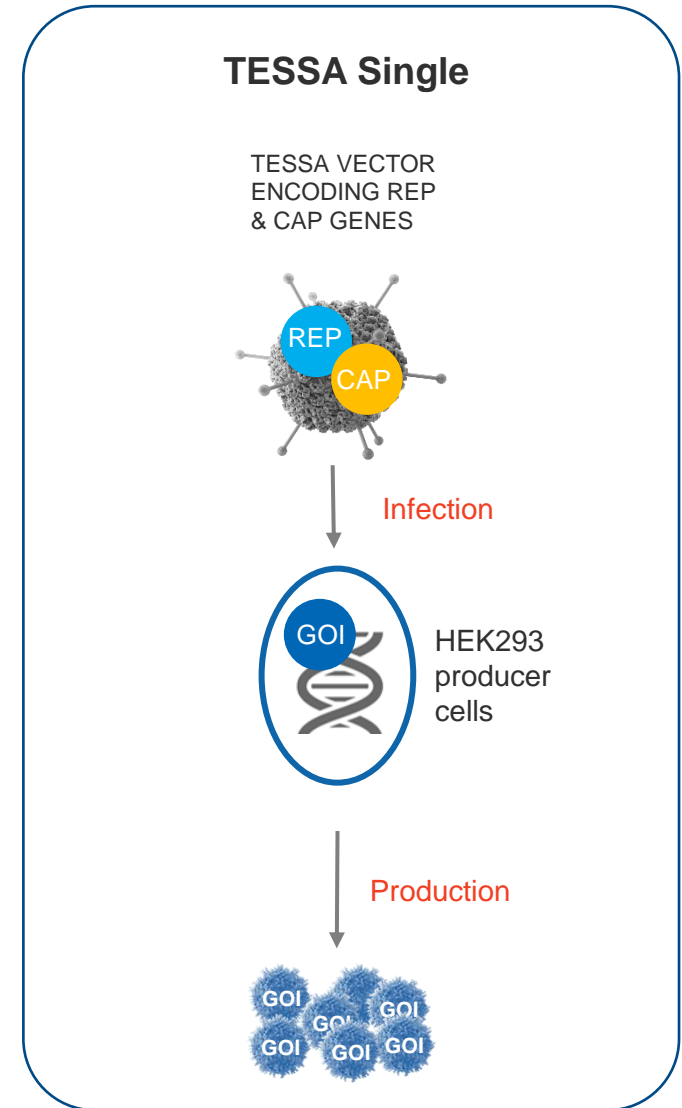
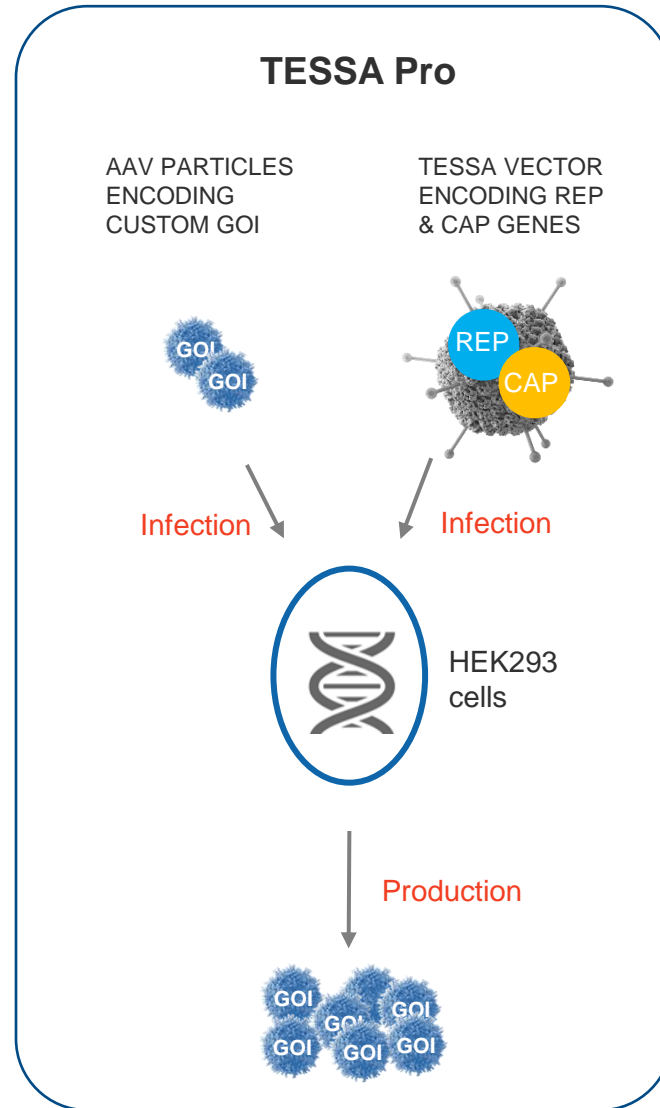
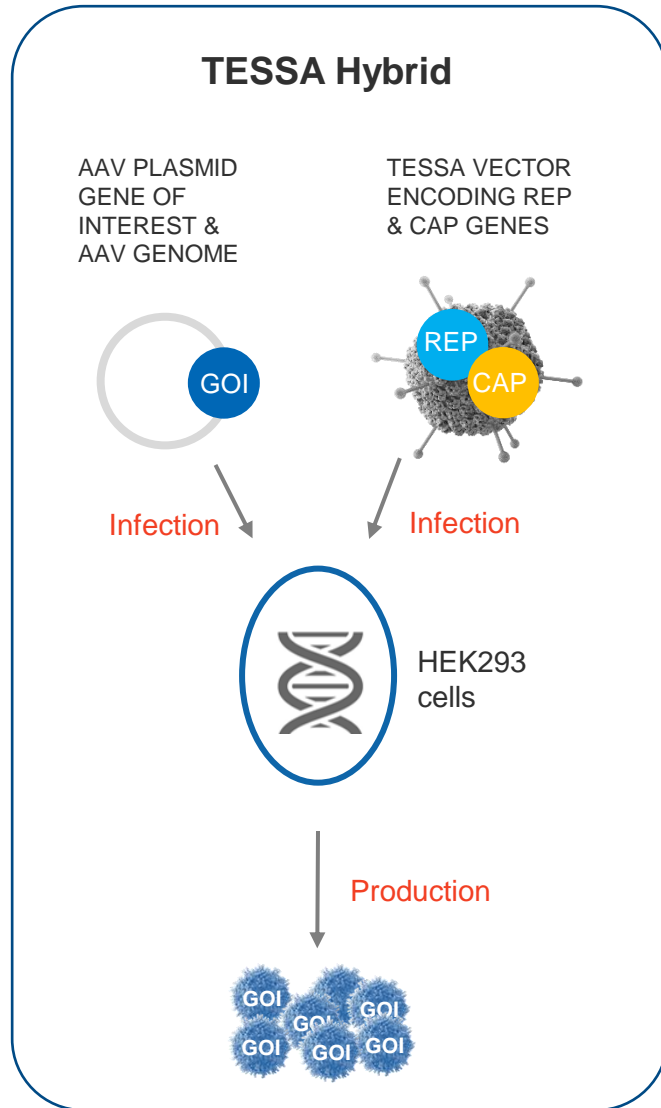
Our Vision

Provide a lentiviral manufacturing platform that mimics the CHO cell line platform used for commercial monoclonal antibody production

Lenti VV Stable Platform Delivers Consistent High Yields for Therapeutically Relevant Genes



Innovative & Versatile Processes to Meet Clients' Needs for Speed and Costs for AAV Manufacturing



The Future of Viral Vector Manufacturing Standard is Here!

- Current viral vector manufacturing approaches require large quantities of expensive plasmids
- Current methods struggle to scale above 200L



200L Bioreactor



1000L Bioreactor

Plasmid-Free, Fully Scalable
Manufacturing of
Lentiviral Vectors (LVV)
&
Adeno-Associated Virus (AAV)

- Our technologies remove the need for plasmids and reduce the costs of manufacturing
- Our new technologies can be scaled >2000L

Accelerated Timelines to IND

CAR-T (CMC)

traditional

10 months

INDexpress

6 months

Viral Vectors (CMC)

traditional

8-14 months

INDexpress

8-9 months

Full Services (CMC + Preclinical)

traditional

20+ months

INDexpress

15 months

Full Services Package: AAV, full IND package, includes GLP tox and bioanalytical assays, full regulatory submission*

- Projects will be able to leverage ATU's experience to identify your unique short-path to IND approval.
- Global manufacturing sites to best-accommodate to the relevant regional regulatory guidance(s).
- Dedicated facilities infrastructure and resources for INDexpress projects.
- All analytical testing methods and release assays are included (ATU-qualified and -validated assays).
- Devoid of extensive lead times for programs in cell therapies, viral vectors and plasmid synthesis.

Seamlessly move into GMP manufacturing

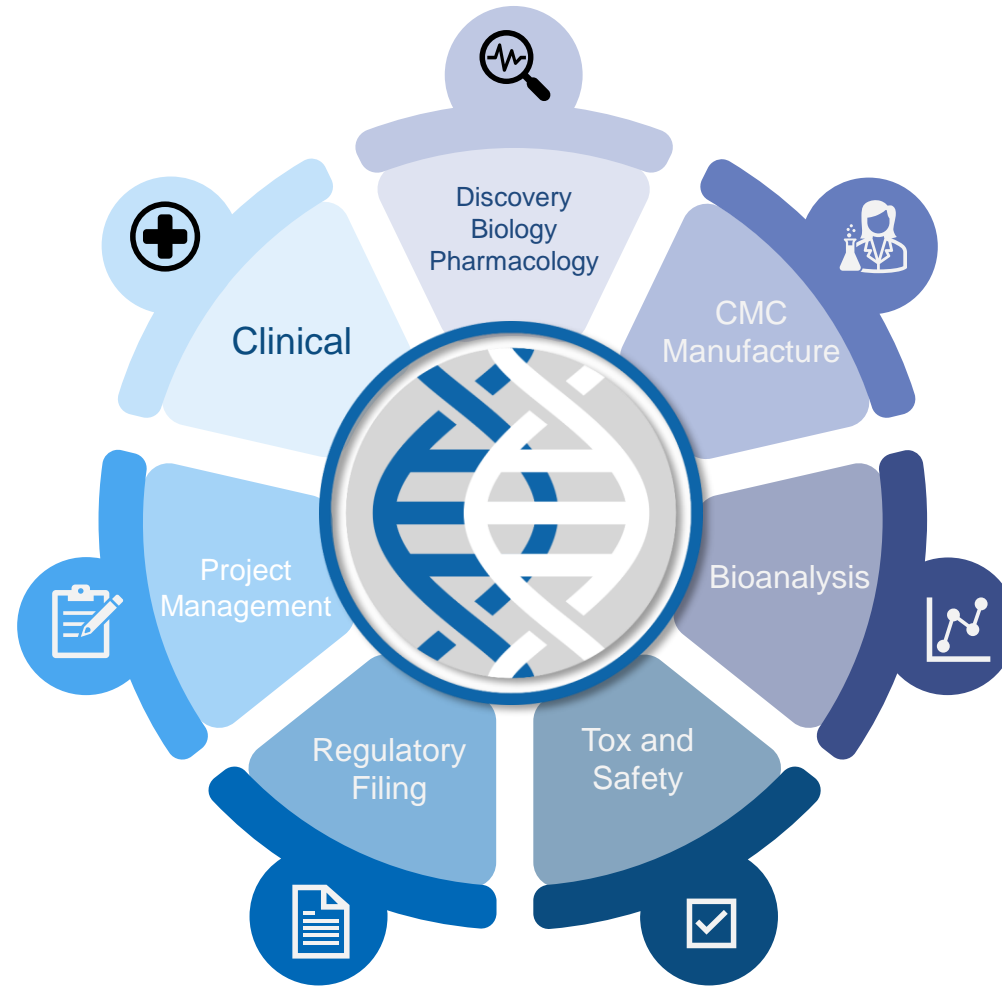
Solution-Centric Portfolio: from DNA to IND to BLA for Cell & Gene Therapies

Leverage the entire WuXi AppTec service portfolios for the development of advanced therapies

WuXi ADVANCED THERAPIES
药明生基

药明康德
WuXi AppTec

- Plasmid Synthesis
- AAV Production
- Cell Therapies
- DS Production
- DP Production
- CGT Testing



药明康德
WuXi AppTec

Biology & Testing

- Pharmacology
- Safety Toxicology
- Biodistribution
- Bioanalysis
- Clinical Trial Services
- *in vitro* Potency
- Submission Services

药明康德
WuXi AppTec

IND Express: Cell Therapy (w/ plasmid and LVV)

Company A

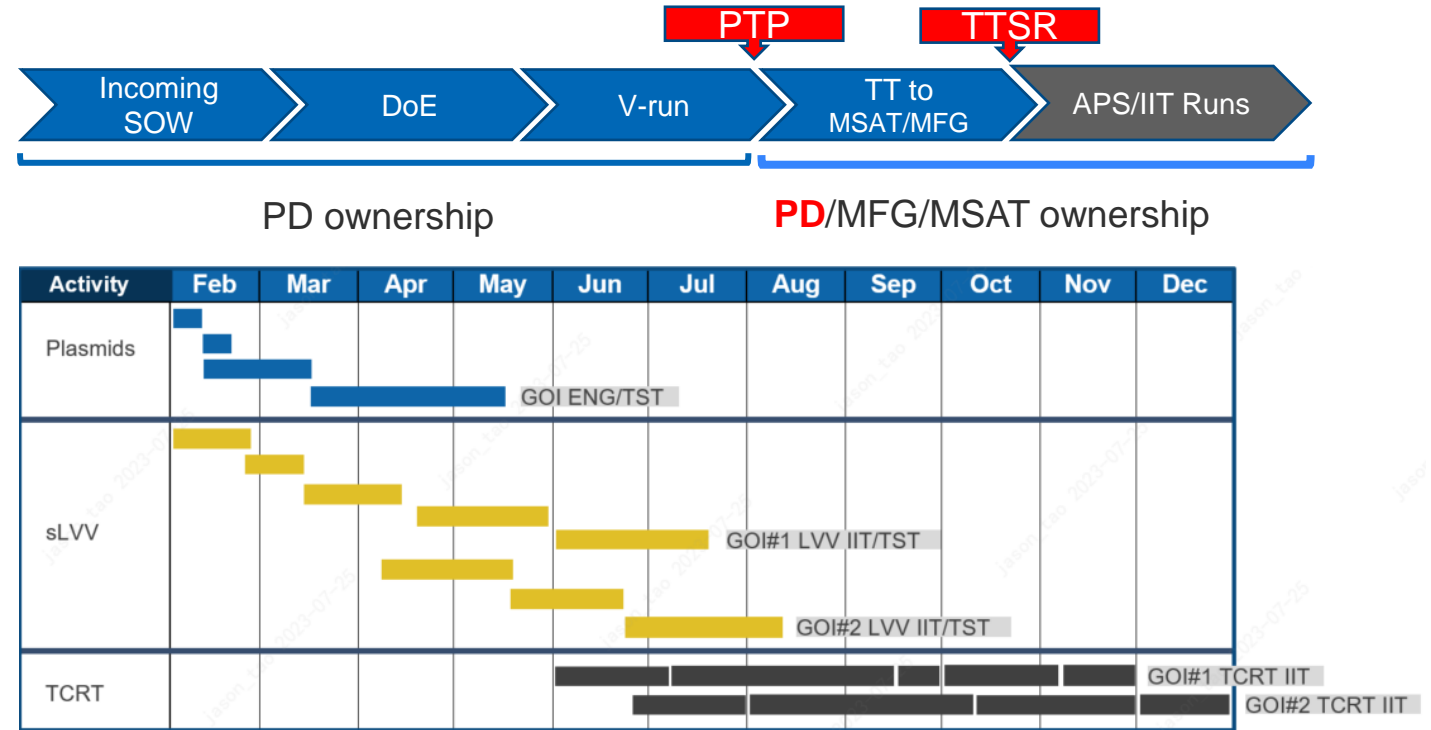
- IND Express Case in Progress for Investigator Initiated Trial (“IIT”) Purpose in China
- 2*TCRT IIT in **11 Months** (from Plasmid to Cell Therapy Product)

- ATU will provide CDMO Services for Company “SR” 2*TCRT IIT project:

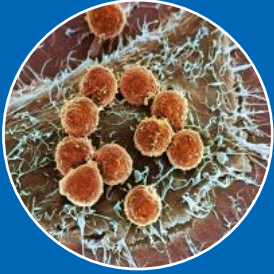
- 2*GOI Plasmid: PCB banking, Demo and Verification run, ENG (IIT) run
- 2*GOI LVV: DoE, Demo, 2*Verification, IIT run
- 2*GOI TCRT: MOI study, Process optimization, APS, ENG and IIT run

- IND Express Strategy

- Adopt overlapping execution by risk assessment to shorten the project line
- Fully integrated PD/AD, clinical MFG and QC to enable IIT batch manufacture and release testing



Near Term Growth Catalysts with Four Commercial Products to be Launched in 2023/2024



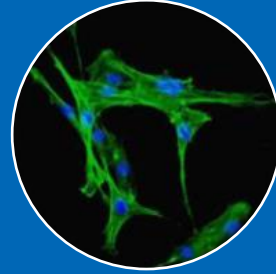
TIL: IND to BLA

- ✓ 2015-Present
- ✓ 450+ Clinical Batches
- ✓ 1000+ Potency Tests
- ✓ Commercial Supply at more than 300 batches / year starting **late 2023**



Plasmid & LVV: IND to BLA

- ✓ 2018-Present
- ✓ 8 Months from project start to IND
- ✓ CDE on-site inspection completed in March 2023
- ✓ Commercial Supply to start upon NMPA approval



CAR-T: To Provide Commercial Supply

- ✓ 2023-Present
- ✓ Tech transfer to PAS filing 14 months
- ✓ Commercial Supply Launch at 1000+ batches / year starting 2H-2024
- ✓ Ramping up to more batches / year by 2026



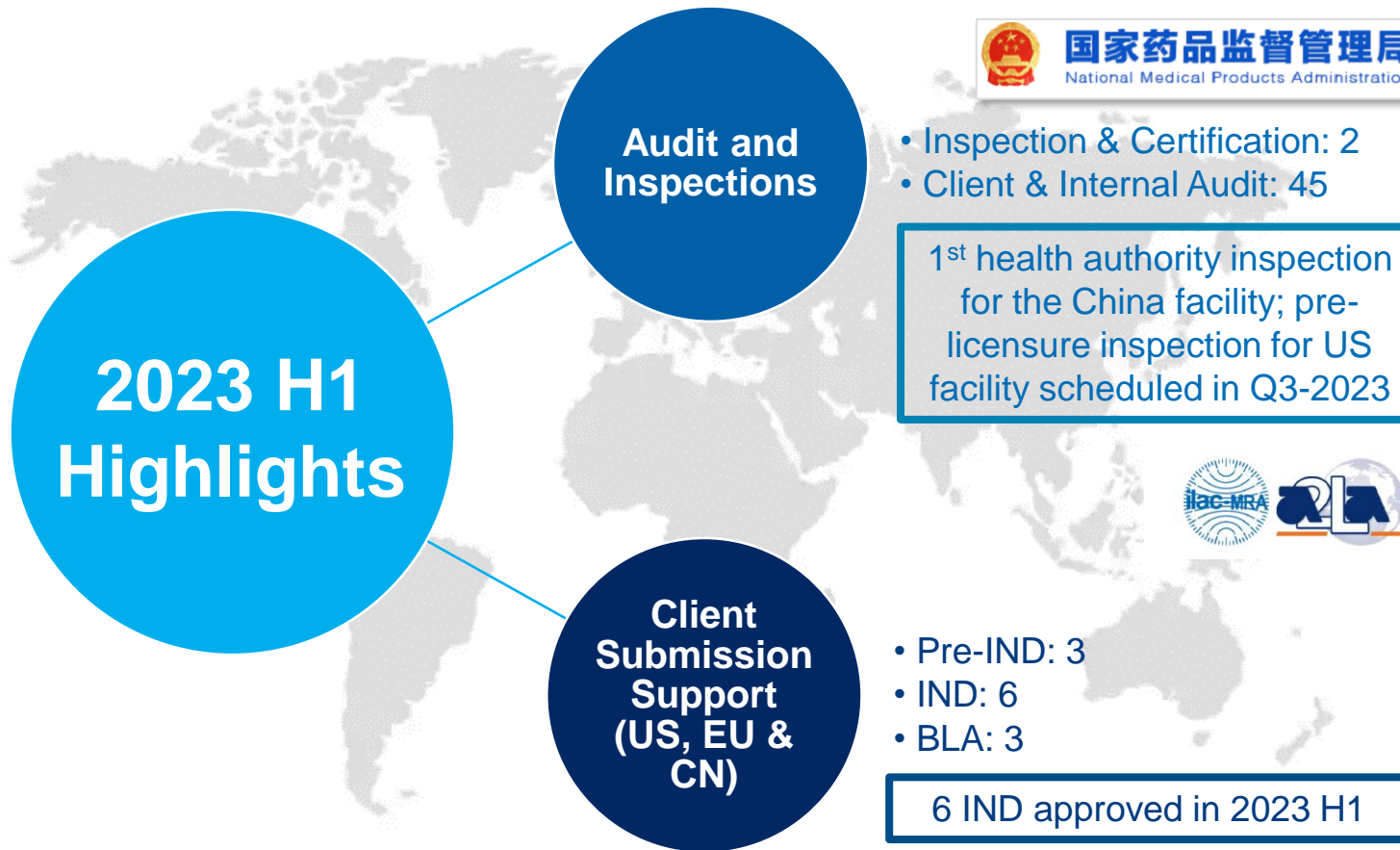
LVV: Commercial Supply for CAR-T

- ✓ 2020-Present
- ✓ PPQ in progress
- ✓ Post PPQ supply starting in early 2024
- ✓ FDA PAI submission in 1H 2024
- ✓ Commercial supply at 40-120 batches / year starting 2H-2024

Full Regulatory Support for IND/BLA Filing; PLI (Inspection) Readiness Leading to Commercialization

WuXi ATU Quality and Regulatory

Consistently Deliver Quality Compliance & Regulatory Services



Recent Inspection/Certification

- March 2023; NMPA (China) Inspection
- March 2023; ISO 17025 Re-certification
- August 2022; USDA Inspection
- March 2022; TGA (Australia) GMP Inspection
- December 2021; EMA GMP Inspection
- June 2021; USDA Inspection
- February 2021; ISO 17025 Re-certification
- January 2020; FDA GMP Inspection
- December 2019; EMA GMP Inspection
- March 2019; TGA (Australia) GMP Inspection
- March 2019; PMDA (Japan) GCTP Inspection



- US Philadelphia FEI #1000122198; Active Type V DMF for all four facilities
- China Huishan FEI #3017796768

WuXi ATU is Well Positioned to Transform CGT Industry to Reach its Full Potentials to Make CGT Products Affordable for Many Patients

Our integrated **CTDMO model** will drive strong growth in years to come and enable CGT industry efficiently develop and commercialize game changing therapies for patients in need

01

02

Our technology and manufacturing platforms will continuously improve productivity and **drive down** manufacturing **costs** of CGT products

WuXi
ATU

03

Our integrated testing, development and manufacturing platform enables us to meet very tight **Vein-to-Vein** turnaround time requirements for **cell therapies**

04

TESSA and Stable Lenti-Cell Line technology will transform future **AAV and LVV** manufacturing

05

Our **track record and reputation** of supporting customers to develop CGT products from DNA to IND to BLA and commercialization will enable us to grow strongly in years to come