Allogene THERAPEUTICS

The Next Revolution in Cell Therapy

Leading Today, Creating Tomorrow

November 2021

Legal Disclaimers

To the extent statements contained in this Presentation are not descriptions of historical facts regarding Allogene Therapeutics, Inc. ("Allogene," "we," "us," or "our"), they are forward-looking statements reflecting management's current beliefs and expectations. Forward-looking statements are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels or activity, performance, or achievements to be materially different from those anticipated by such statements. You can identify forward-looking statements by words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements contained in this Presentation include, but are not limited to, statements regarding: clinical outcomes, which may materially change as more patient data become available; the timing and ability to progress the clinical trials of ALLO-501, ALLO-501A, ALLO-316, ALLO-715 and ALLO-605, including the timing and ability to progress to a Phase 2 clinical trial of ALLO-501A; the ability to manufacture AlloCAR T™ therapies for use in clinical trials; and the potential benefits of AlloCAR T™ therapy. Various factors may cause differences between Allogene's expectations and actual results as discussed in greater detail in Allogene's filings with the Securities and Exchange Commission (SEC), including without limitation in its Form 10-Q for the quarter ended September 30, 2021.

Caution should be exercised when interpreting results from separate trials involving separate product candidates. There are differences in the clinical trial design, patient populations, and the product candidates themselves, and the results from the clinical trials of autologous products may have no interpretative value on our existing or future results.

Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. This Presentation shall not constitute an offer to sell or the solicitation of an offer to buy securities, nor shall there be any sale of securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

Allogene: A Leader in Allogeneic Cell Therapy

3
years since inception

~300
employees

5
clinical trials including four "firsts", subject to FDA review:
- First pivotal trial
- First solid tumor trial
- First combo trial
- First TurboCAR™ trial

1
singular focus on allogeneic cell therapy

4
foundational platform technologies:
- AlloCAR T™
- TurboCAR™
- iPSC
- Allogeneic manufacturing

Cell Forge 1

$862
million
in cash, cash equivalents and investments as of Sept 30, 2021

>130
based on reported data, more patients have been treated with Allogene's AlloCAR T™ therapies than any other allogeneic CAR T therapy in development

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Allogeneic Pipeline For Vast Array of Tumors

CATEGORY		PROGRAM	PRE-CLINICAL	PHASE 1	PHASE 2/3[2]
Hematological Malignancies	CD19	***ALPHA2*: ALLO-501A (NHL)[1*]**			
		***ALPHA*: ALLO-501 (NHL)[1*]**			
	BCMA	***UNIVERSAL*: ALLO-715 (MM)***			
		***UNIVERSAL*: ALLO-715 + nirogacestat(MM)[3*]**			
		IGNITE*: ALLO-605 (TurboCAR™/MM)			
		ALLO-316 (CD70/AML)			
		ALLO-819 (FLT3/AML)			
Solid Tumors		***TRAVERSE*: ALLO-316 (CD70/RCC)***			
		DLL3 (SCLC)			
		8 Undisclosed Targets			
Lymphodepletion Agent		**ALLO-647 (Anti-CD52 mAb)[4*]**			

**** Clinical Trials currently on FDA Clinical Hold***

[1] Servier holds ex-US commercial rights

[2] Phase 3 may not be required if Phase 2 is registrational

[3] Allogene Sponsored trial in combination with SpringWorks Therapeutics

[4] ALLO-647 intended to enable expansion and persistence of allogeneic CAR T product candidates

Innovating CAR T Therapies to Potentially Expand Access & Reduce Cost

Cost

- Scalable and efficient manufacturing
- Potential to treat 100+ patients from a single manufacturing run
- Opportunity to reduce ancillary cost of care associated with autologous therapy

Innovation

- Multiplex gene engineering/editing capabilities
- Opportunity for product optimization

Access

- Potential to treat all eligible patients
- Re-dosing, if needed
- No need for complex logistics or bridging therapy

Speed/Reliability

- “Off the shelf” for on demand treatment
- Less product variability, made from healthy T cells

Industrializing Allogeneic Cell Therapy Production: Strategy

- Singularly focused AlloCAR T™ platform development enables speed and minimizes cost
- Ownership of manufacturing and testing allows improved process optimization, and control regulatory and compliance
- Investment in partnerships with critical suppliers ensures availability of emergent, high-demand materials
- ALLO-647 development and production, with dedicated ALLO oversight, preserves focus on AlloCAR T's
- Leveraging QTPP framework for product understanding to improve process performance and supports comparability
- COGM is shaped by infrastructure, and operationalization choices

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Industrializing Allogeneic Cell Therapy Production: Infrastructure

Cell Forge 1 (Newark, CA)

- New state-of-the-art facility
- Designed for clinical and commercial manufacturing, analytical testing and distribution of cell therapies
- Construction complete in 2020, first GMP production planned for 2021

South San Francisco Facilities

- Manufacturing process and product development
- Analytical methods for process and product understanding and release
- Quality Assurance and Quality Control

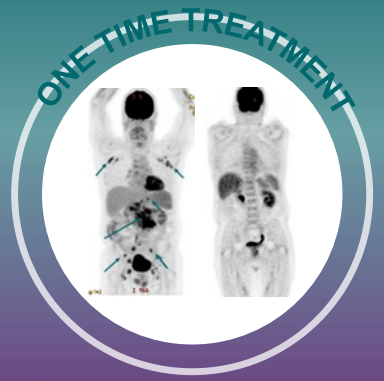
External Network

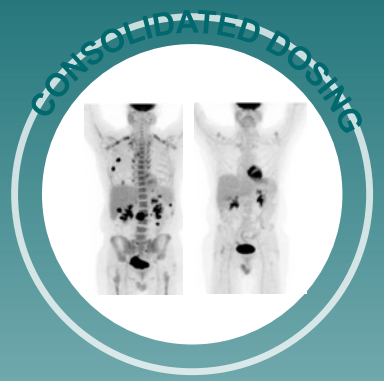
- Broad CMO and supplier network
- Incorporating external expertise for starting materials, drug substance and drug product manufacturing
- Packaging, labeling, logistics and clinical distribution

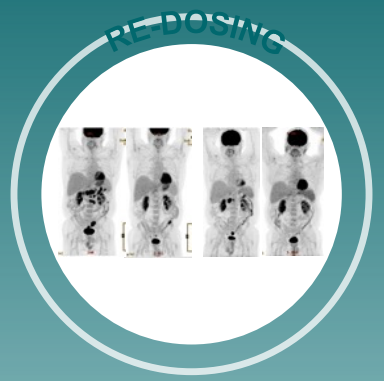
Establishing a New Standard in CAR T Therapy

AlloCAR T™ ▶ Ability to treat all eligible patients ▶ Outpatient opportunity

36% 6-Month CR Rate







Autologous CAR T

29-40% 6-Month CR Rate

AlloCAR T™: Interim results from Phase 1 ALPHA trial of ALLO-501 of autologous CAR T naïve patients with R/R LBCL; based on a data cutoff as of April 19, 2021
Autologous: Yescarta 6-month CR rate (Locke, AACR 2017); Kymriah 6-month CR rate (Schuster, 2019); Breyanzi 6-month CR rate estimated based on the Breyanzi USPI

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ALLO-501 Well Tolerated Safety in ALPHA Study

n (%)	ALLO-647 39 mg (N=11)		ALLO-647 60 mg (N=6)		ALLO-647 90 mg (N=24)		All patients (N=41)	
	All Gr	Gr 3+	All Gr	Gr 3+	All Gr	Gr 3+	All Gr	Gr 3+
IRR	5 (46)	-	3 (50)	-	18 (75)	1 (4)	26 (63)	1 (2)
CRS	2 (18)	-	1 (17)	-	8 (33)	-	11 (27)	-
ICANS	-	-	-	-	1 (4)	1 (4)	1 (2)	1 (2)
GvHD	-	-	-	-	-	-	-	-
Infection	7 (64)	1 (9)	1 (17)	1 (17)	17 (71)	8 (33)	25 (61)	10 (24)
SAE-TEAE/ ALLO-501	1 (9)	-	-	-	-	3 (13)	4 (10)	4 (10)

Data based on clinical database up through 19 Apr 2021.

Treatment emergent deaths without disease progression: fungal pneumonia (n=1); COVID-19, acquired in the community setting (n=2); arrythmia (n=1); stroke (n=1)

- No dose limiting toxicities or GvHD observed
- Only one (2%) Grade 3 Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS)
- CRS was mild to moderate in severity and manageable with standard guidelines
- Infection rates similar to that observed in autologous CAR T trials

ORR, CR and 6-Month CR on Par with Autologous CD19 CAR T

Response Rate for Autologous CAR T Naïve by Disease Subtype (mITT)

	LBCL	FL	All patients
	(N=11)	(N=21)	(N=32)
ORR n (%)	7 (64)	17 (81)	24 (75)
95% CI	31, 89	58, 95	57, 89
CR n (%)	5 (46)	11 (52)	16 (50)
95% CI	17, 77	30, 74	32, 68

- ITT and mITT results were nearly identical
  - ITT for LBCL was 58% (ORR) and 42% (CR)
  - ITT for FL identical

6 Month CR Rate

CAR T Naïve	mITT	ITT
LBCL (n=11/12)	**4/11 (36%)**	4/12 (33%)
FL (n=17/17)	**4/17 (24%)**	4/17 (24%)
FL and LBCL (n=28/29)	**8/28 (29%)**	8/29 (28%)

- LBCL 6-month CR rate after initial infusion similar to pivotal trials of autologous CAR T therapies (29% - 40%)*

Data based on clinical database up through 19 Apr 2021.

*Autologous: Yescarta 6-month CR rate (Locke, AACR 2017); Kymriah 6-month CR rate (Schuster, 2019); Breyanzi 6-month CR rate estimated based on the Breyanzi USPI

ALLO-501 Competes Favorably Compared with Autologous CAR T

	ALLO-501 (LBCL N=11) Phase 1 Dose Escalation	KYMRIAH®# Phase 2 Pivotal	YESCARTA®* Phase 2 Pivotal	BREYANZI®+ Phase 2 Pivotal
ORR	64%	50% (label)	72% (label)	73% (label)
CR in LBCL (mITT)	46% (5/11)***	32% (label)	51% (label)	54% (label)
CR in LBCL (ITT)	42% (5/12)	26%	48%	43%
CR at 6 months in LBCL (mITT)	36%	29%	36%	~ 40%
% enrolled** or lymphodepleted^ but did not receive intended cell product	2% (1/42)****	33% (54/165)**	9% (10/111)**	36% (95/299)^
	ALLO-501 (FL and LBCL)			
CRS (Gr 3+, all FL and LBCL)	0%	22%	13%	4%
Neuro Events (Gr3+, all FL and LBCL)	3%	12%	31%	12%
Infection (Gr3+, all FL and LBCL)	24%	20%	23%	19%

KYMRIAH USPI. Patient population in the label includes: 78% - primary DLBCL not otherwise specified (NOS); 22% DLBCL following transformation from Follicular Lymphoma
*YESCARTA USPI & Schuster S et al NEJM 2019. Patient population in the label includes: 76% - DLBC; 16% - Transformed Follicular Lymphoma; 8% Primary Mediastinal Large B-cell Lymphoma.
+BREYANZI USPI. Patient population in label includes: 53% - de novo DLBCL; 25% DLBCL transformed from indolent Lymphoma; 14% high-grade B-cell Lymphoma; 7% Primary Mediastinal Large B-cell Lymphoma; 1% grade 3B Follicular Lymphoma
**Percent of patients who enrolled and did not receive intended cell product including out of spec products
***CAR T naïve patients (n=29); 11 DLBCL. For CR at 6 Month only 10 patients either reached Month 6 or discontinued/died or progressed. Safety population is N=38 (all patients, FL and DLBCL).
****Percent enrolled is based on total number enrolled (includes FL and LBCL) regardless of prior CAR T therapy
^Percent who underwent lymphodepletion but did not receive intended cell product including out of spec products
^^ Kymriah: estimated from Shuster, 2019, Figure 3B., Breyanzi: Abramson, ASH 2019

ALPHA Data Cutoff Date: April 19, 2021

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Consolidated Dosing: Exploring a Unique Allogeneic Attribute

ORR for Autologous CAR Naïve Patients and Responders to Prior Autologous CAR Therapy

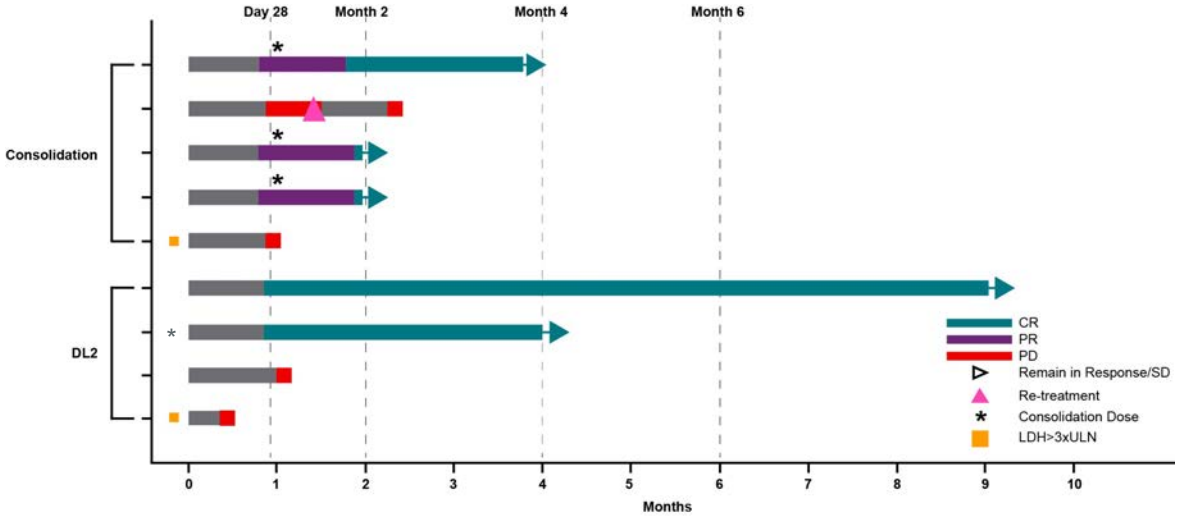
	DL2 (N=4)	Consolidation (N=5)	All patients‡ (N=9)
ORR n (%)	2 (50)	3 (60)	5 (56)
95% CI	7, 93	15, 95	21, 86
CR n (%)	2 (50)	3 (60)	5 (56)
95% CI	7, 93	15, 95	21, 86

Responses in Patients who Received Consolidation Across Studies

Study/disease	Time from 1st dose (months)	D28	D56	Month 4
ALPHA2/LBCL[a]	4.8	PD	PD	NA
ALPHA2/LBCL	4	PR	**CR**	CR
ALPHA2/LBCL[b]	3.7	PD	NA	NA
ALPHA2/LBCL	3	PR	**CR**	-
ALPHA2/LBCL	2	PR	**CR^**	-
ALPHA/FL	3	CR	CR	-
ALPHA/FL	2	PR	PR^	-
ALPHA/FL	2	PR	**CR^**	-

Dash (-) represents patients who have not yet reached the timepoint and only includes subjects that received their second consolidation dose
^ Clinical database data cutoff of 19 Apr 2021; additional unaudited data up through 12 May 2021 are included.
[a] Patient experienced PD at day 28 and underwent retreatment.
[b] Patient experienced PD and did not undergo further treatment with ALLO-501.

Swimmer Plot of Tumor Response to Study Treatment



* Patient received Yescarta, achieved a 16-week CR followed by relapsed

- 56% ORR and CR
- 75% ORR and 63% CR among patients (n=8) treated in the consolidation cohorts across ALPHA studies
- Re-expansion of CAR T cells seen after second CAR T dose

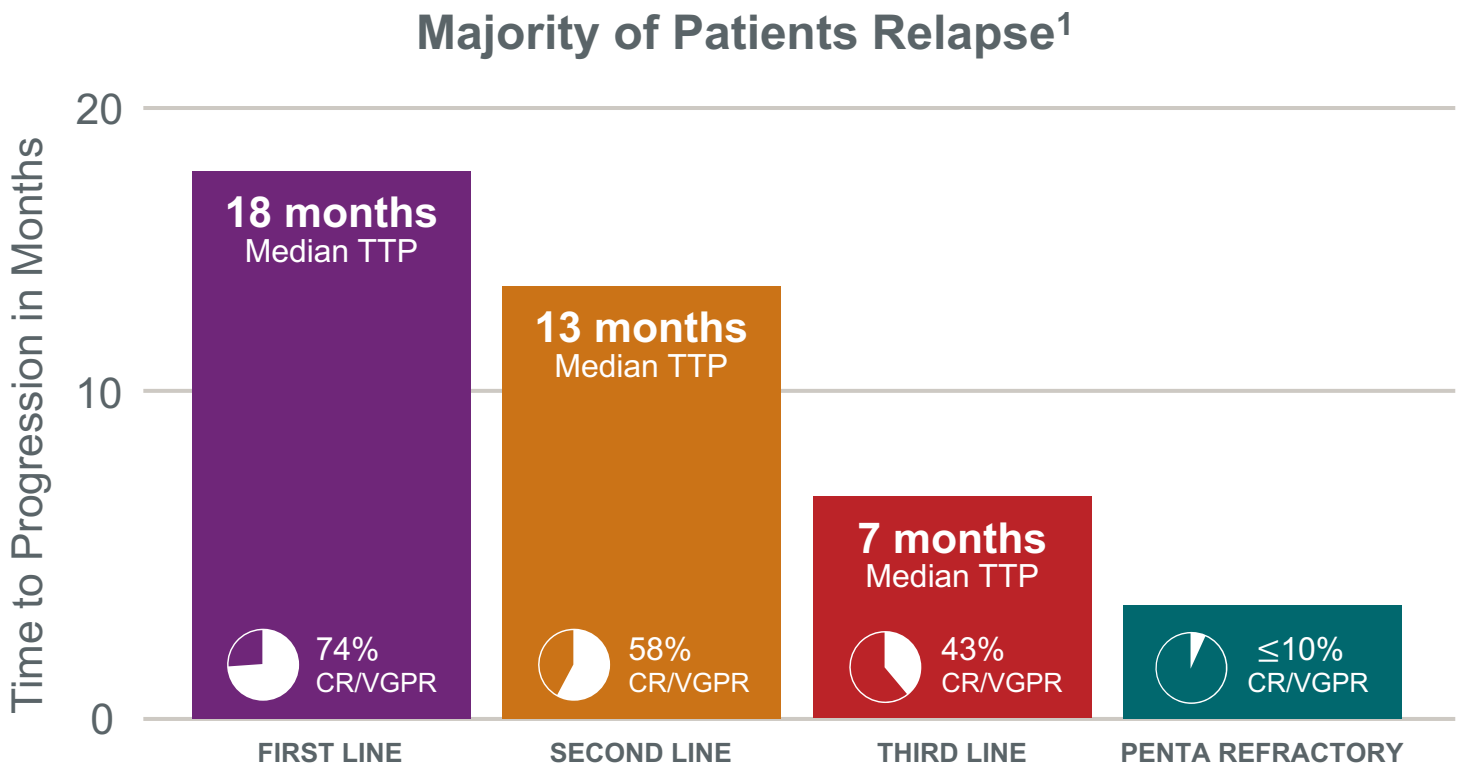
CD19 Program: De-Risking AlloCAR T™ Therapy

- Favorable ORR and CR rates of 75% and 50%, respectively in CAR T naïve patients
  - 36% of Large B Cell Lymphoma patients in CR at month 6 following a single infusion
  - Longest ongoing CR 15+ months
- ITT results nearly identical to mITT results reflecting ability to treat nearly every enrolled patient; Median/mean time of 5 days from enrollment to start of therapy.
- No dose limiting toxicities or graft-vs-host disease and limited Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS) and Cytokine Release Syndrome (CRS)
- Interim Phase 1 ALPHA2 Data Demonstrated Consistent Efficacy and Safety Profile for ALLO-501A Relative to ALLO-501
- Consolidation Dosing Shows Early Promise with Four Patients Converting from Partial Response to CR Following Second Dose of ALLO-501/A
- Clinical trials recently placed on clinical hold following a report of a chromosomal abnormality in ALLO-501A CAR T cells in a patient treated in the ALPHA2 study

Why Allogeneic Cell Therapy Matters in Multiple Myeloma

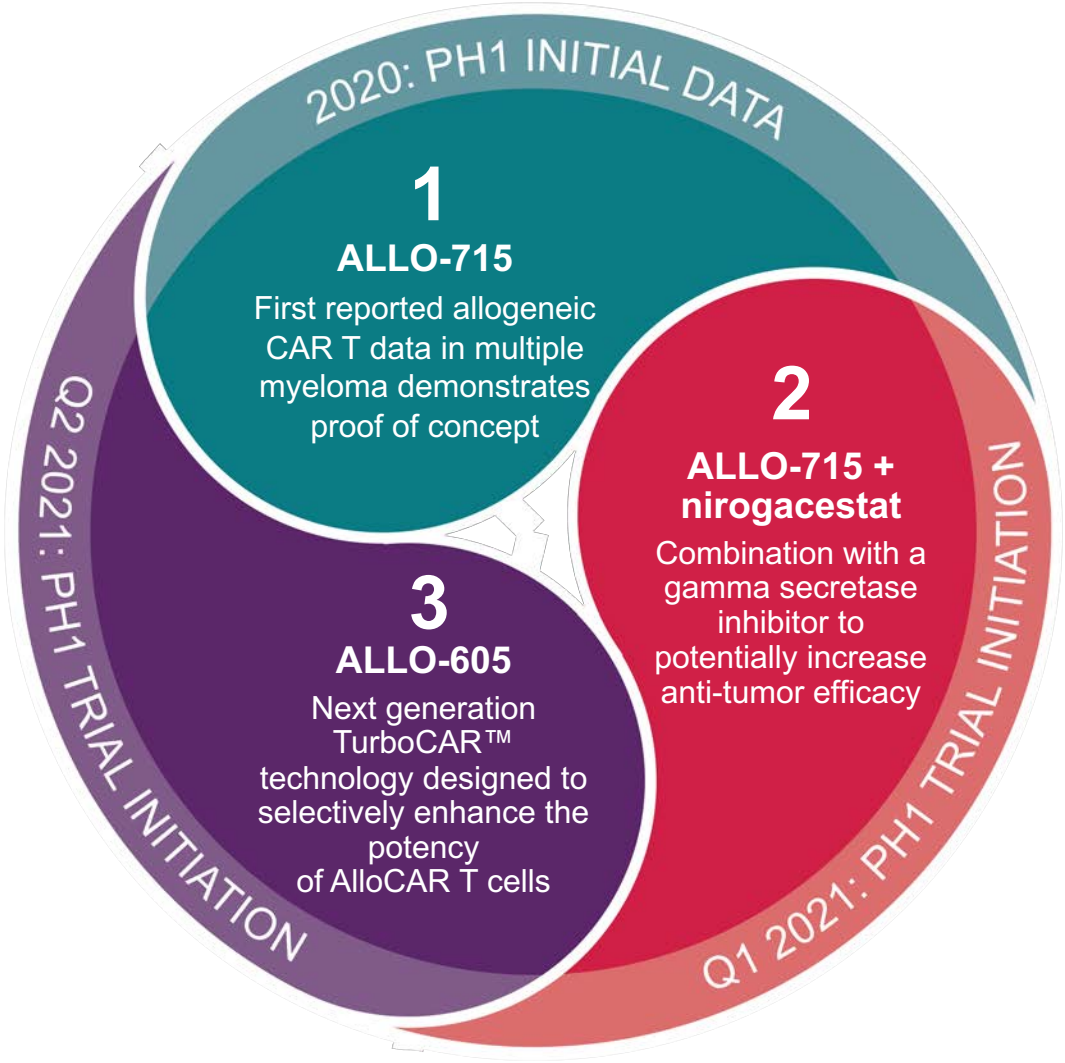
- Multiple myeloma is a progressive disease. Prognosis for patients worsens over time
- Bridging therapy to “control” the disease may increase some cumulative or synergistic toxicities for the patients[2]

Time is of the essence for patients with rapid progression



[1]Bird SA, Boyd K. Palliat Care Soc Pract. 2019;13:1-13
[2]Zheng Ping-Pin, et al. Drug Discovery Today June 2018; 23:6; 1175-82
[3] Gandhi, et al., *Leukemia*. 2019 September ; 33(9): 2266–2275. doi:10.1038/s41375-019-0435-7; TTP based upon conditional mPFS reported, VGPR based on interpolated values

Building an Anti-BCMA AlloCAR T™ Franchise in Multiple Myeloma*



*Pending FDA review

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ALLO-715: First AlloCAR T™ To Demonstrate Feasibility in Myeloma

ALLO-715 UNIVERSAL Ph1 Trial: *Initial Data Readout: ASH 2020*
Next Steps: *Q4 2021 Update on Single Dose ALLO-715*

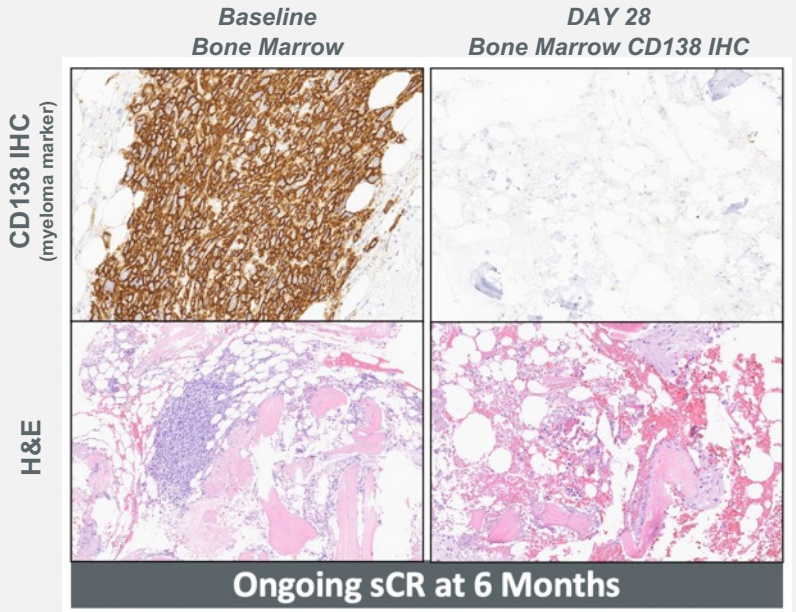
Clear benefits associated with an off-the-shelf therapy:
- ~90% of patients treated within 5 days of study enrollment
- Obviates need for bridging therapy prior to dosing

Well tolerated across dose levels:
- No GVHD or neurotoxicity (ICANS); manageable grade 1 or 2 CRS
- Infection rate on par with other studies in advanced myeloma

Dose dependent ALLO-715 activity observed in heavily pretreated, refractory patients
- ALLO-715 cell persistence observed through month 4
- 320M cell dose of ALLO-715 (DL3) with FCA lymphodepletion associated with a 60% Overall Response Rate (ORR)
- 5 of 6 VGPR+ patients assessed for MRD status; all were negative

ASH 2020; image on file

ALLO-715 Case Study: Ability to Achieve a Durable Deep Response



9 prior lines of therapy, progressing on last line of therapy

ALLO-715: Initial Data Creates Pathway for Allogeneic CAR T in MM

Initial Safety Compared to BCMA Directed Therapies

	ALLO-715 Ph1 (N=31)[1]	Ide-Cel (ABECMA) 300/450M N=127[2]	Orva-Cel 300/450/600M N=62[3]	Cilta-Cel 0.75M/kg N=97 [4, 5]
Cytokine Release Syndrome (CRS)	**45%**	85%	89%	95%
CRS (Grade ≥3)	**0**	9%	3%	2%
Neurologic Toxicity	**0**	28%	13%	20%
Neurologic Toxicity (Grade ≥3)*	**0**	4%	3%	9%
Infection (Grade ≥3)	**16%**	23%	13%	20%
Neutropenia (Grade ≥3)	**52%**	96%	90%	95%
Death from AEs	**3%**	6%	3%	6%

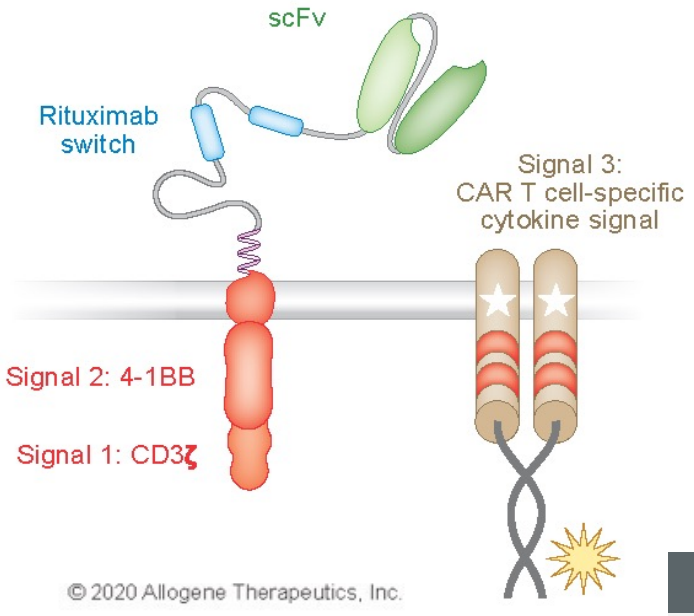
1 ASH 2020; 2 Package Insert; 3 Mailankody, ASCO 2020 (Orva-cel) ; 4 Madduri, ASH 2020 Presentation, 5 Usmani, ASCO 2021 Presentation

Initial Responses Compared to BCMA Directed Therapies

Cell Dose & LD regimen	ALLO-715 320M & FCA (N=10)[1]	Ide-Cel (BB/BMS) 300/450M N=100[2]	Orva-Cel (Juno/BMS) 300/450/600M N=62[3]	Cilta-Cel (JNJ) 0.75M/kg N=97[5]
ORR, %	**60%**	72%	92%	98%
VGPR+ Rate, %	**40%**	53%	68%	95%
MRD- Rate, % (N Evaluated)	**100% (4/4)**	75% (21/28)	84% (21/25)	92% (56/61)

1 ASH 2020; Responses included 2 subjects with only day 14 assessment and 1 subject who converted from a confirmed PR to VGPR (pending confirmation). ; 2 Package Insert; TT population was n=135 with 11 patients not receiving treatment and 24 patients receiving doses outside the specified range; Munshi, ASCO 2020 (Ide-cel); 3 Mailankody, ASCO 2020 (Orva-cel) ; 4 Madduri, ASH 2020 Abstract, 5 Usmani, ASCO 2021 Presentation

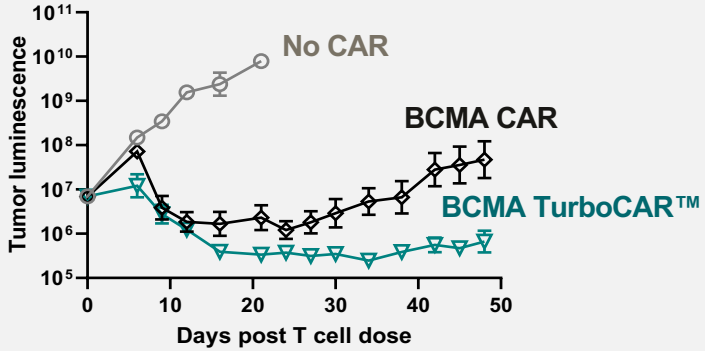
ALLO-605: First TurboCAR™ Investigational Candidate



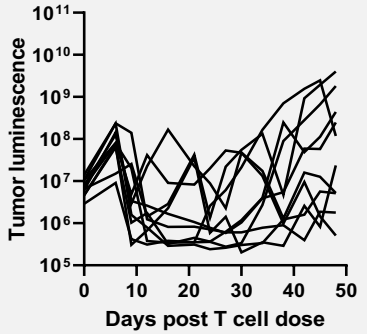
FTD Granted June 2021

- **TurboCAR™ is designed to recapitulate cytokine signaling selectively in CAR T cells**
  - Does not stimulate host immune cells which could cause systemic toxicity or reject CAR
  - Delivers survival benefit selectively to CAR T cells
- **Opportunities for development include:**
  - Improving the efficacy of CAR T cells
  - Reducing CAR T cell dose requirement
  - Overcoming exhaustion to enable CAR T therapies for solid tumors
- **Improved Engraftment and Persistence, and Delayed Exhaustion seen in preclinical studies**

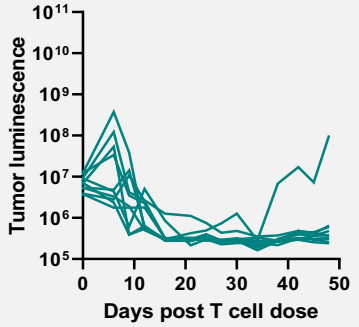
Enhanced Activity and Durability of Response



BCMA CAR



BCMA TurboCAR™



ALLO-605*: IGNITE Study Utilizing First TurboCAR™ to Target BCMA

Phase 1/2, Open-label, Multicenter Dose Escalation and Dose Expansion Study

Primary Endpoints (Phase 1)

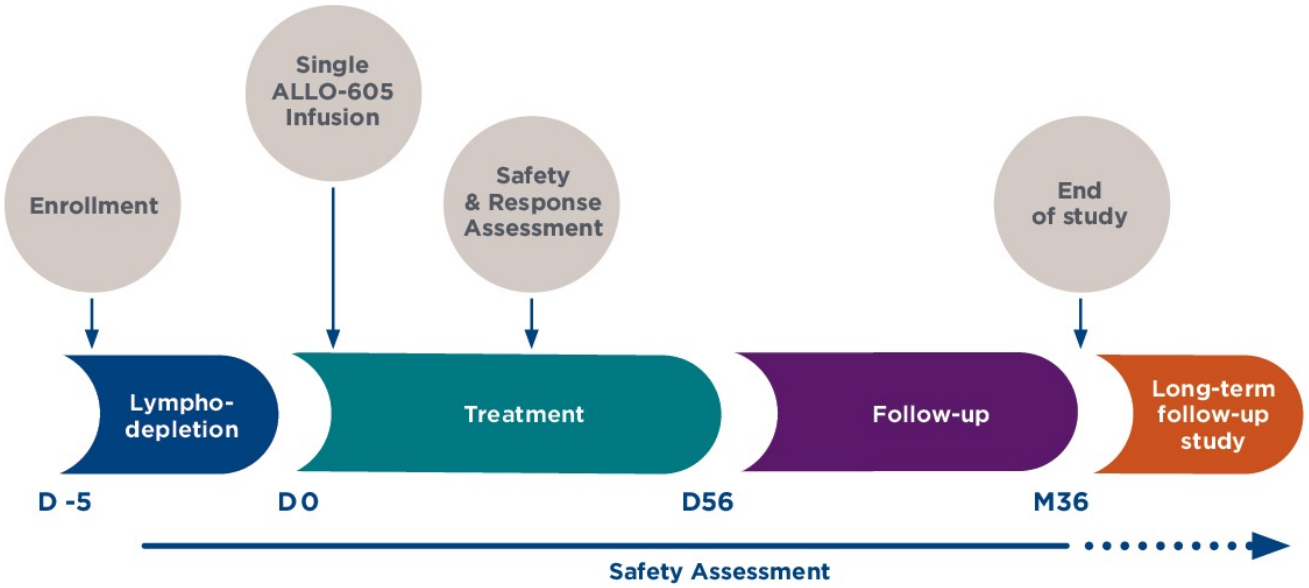
- Safety and tolerability of ALLO-605

Secondary Endpoints (Phase 1)

- Anti-tumor activity and cellular kinetics of ALLO-605
- ALLO-647 pharmacokinetics
- Evaluate immunogenicity against ALLO-605 and ALLO-647
- Evaluate responses in subjects with previous treatment with an anti-BCMA targeted therapy

Key Eligibility Criteria

- Relapsed/Refractory Multiple Myeloma
- ≥ 3 prior therapies including IMiD, PI & anti-CD38
- Refractory to last prior therapy
- ECOG 0 or 1
- No donor-specific antibodies
- No bridging therapy
- Adequate hematologic, renal liver, pulmonary and cardiac functions



ALLO-605 Dose Escalation: 80, 120, 360, x 10^6 CAR^+ T cells

*Pending FDA review

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Translating CAR T Success in Hematologic Cancers to Solid Tumors

2020 American Cancer Society Statistics

	Heme Malignancies	Solid Tumors
Incidence	179,000	1,600,000
Deaths	57,000	504,000

Worldwide Market for Oncology Drugs in 2018*

- All drug spend = $1.2 trillion
- Total cancer drug spend ≈ $150 billion
- Hematologic cancer drugs ≈ $31.3 billion

*IQVIA

Significant opportunity to expand benefits of CAR T therapy into largest area of unmet need

Target Selection/Validation

- CAR optimization
- Multi-targeting CARs

T Cell Fitness

- CAR signaling/ TurboCARs™
- Manufacturing improvements

Tumor Trafficking

- Combinations
- CAR T engineering

Immunosuppressive TME

- Next generation TurboCARs™
- Enhanced/flexible lymphodepletion
- CAR T cell doses, frequencies and administration of cells

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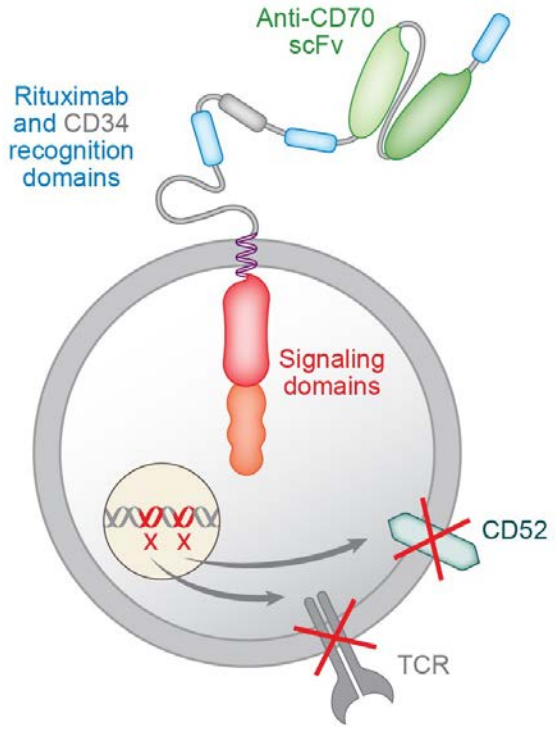
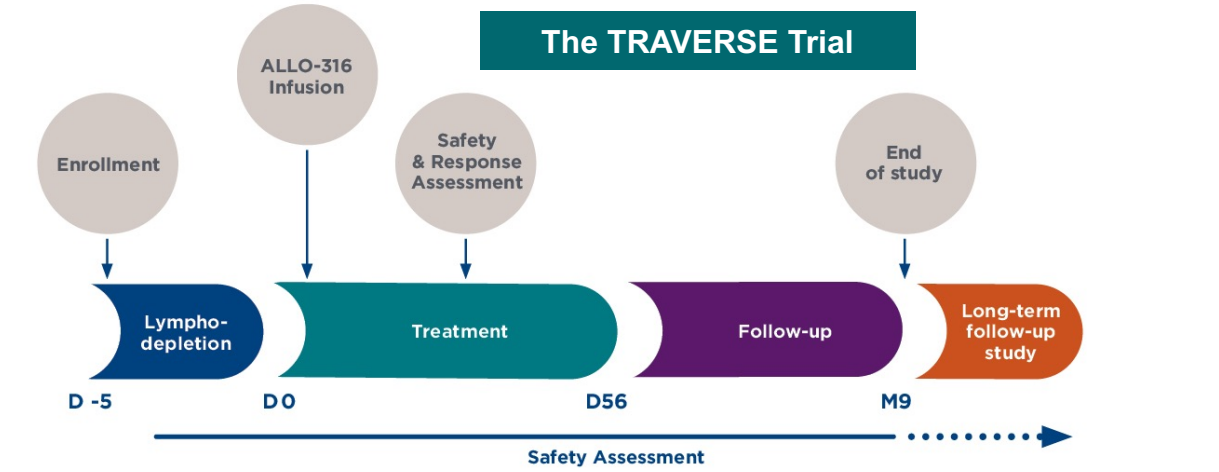
ALLO-316*: Investigating an AlloCAR T™ in Renal Cell Carcinoma

First of Several Solid Tumor Candidates Planned for Clinical Development





ALLO-316 Dose Escalation: 40, 120, 360, 480 x 10^6 CAR^+ T cells

CD70 target selectively expressed in several cancers[1]:

- RCC (80-100% of tumors):
  - High prevalence with limited 'off tumor' expression
- AML (96% of tumors)

IND cleared for anti-CD70 candidate ALLO-316:

- ALLO-316 is associated with minimal or no fratricide
- Phase I TRAVERSE trial in RCC began in 1H 2021*
  - Primary endpoints: Safety and tolerability
  - Secondary endpoints: Anti-tumor efficacy, PK/PD

[1] Expert Opin Ther Targets. 2008 Mar; 12(3): 341–351. doi: 10.1517/14728222.12.3.341

*Ongoing trial enrollment pending FDA review

Allogene THERAPEUTICS

Partnerships: Accelerating Development and Positioning for the Future

Global development partner for CD19 with ex-US commercialization rights

Established Allogene Overland Biopharm joint venture to develop and commercialize AlloCAR T™ cell therapies in greater China

TALEN gene editing

Induced pluripotent stem cells (iPSC)

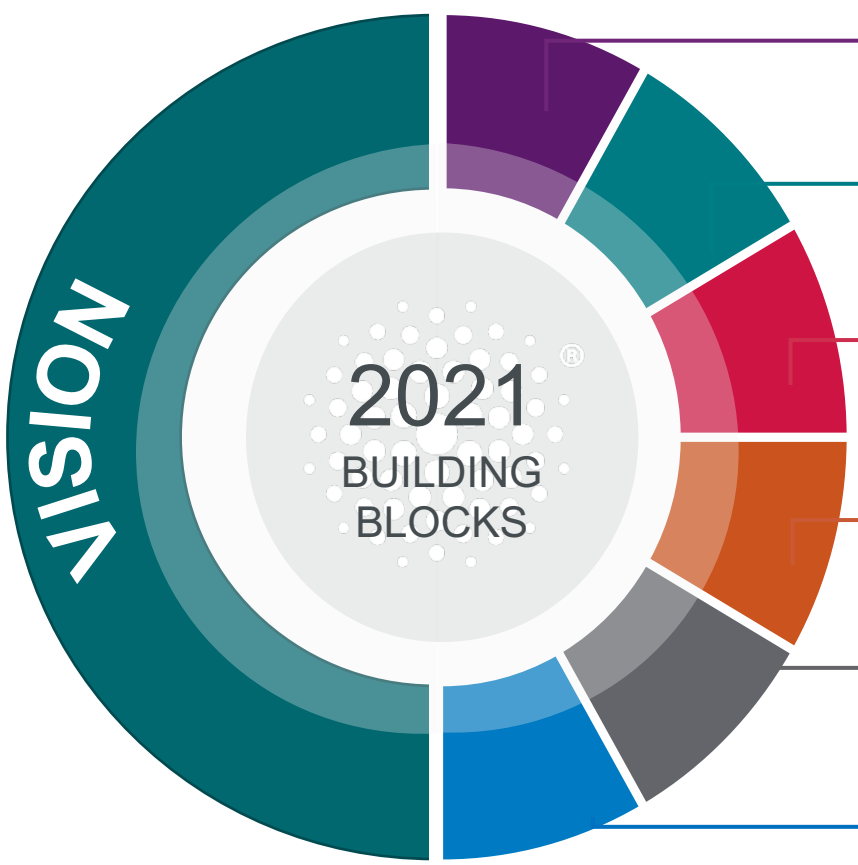
Enhanced manufacturing efficiency

Preclinical and clinical investigation of AlloCAR T candidates across Allogene's broad portfolio of hematologic and solid tumors

Clinical collaboration to evaluate ALLO-715 in combination with Nirogacestat

GLOBAL EXPANSION | TECHNOLOGIES | RESEARCH

2021 Building Blocks to the Allogene Vision



- ☑ 1H: Initiate ALLO-715 (BCMA) + nirogacestat clinical trial
- ☑ 1H: Initiate ALLO-316 (CD70) clinical trial in RCC
- ☑ 1H: Submit ALLO-605 (BCMA) TurboCAR™ IND
- ☑ 1H: ALLO-501/ALLO-501A (CD19) clinical update
- 2H: ALLO-715 (BCMA) and CD19 clinical update
- Pending Timing Update: Initiate ALLO-501A pivotal trial

Create and lead the next revolution in cancer treatment
by delivering to patients the first AlloCAR T™ therapies for blood cancers and solid tumors.

Allogene THERAPEUTICS

Allogene THERAPEUTICS

The Next Revolution in Cell Therapy

Leading Today, Creating Tomorrow

Allogene therapies utilize TALEN® gene-editing technology pioneered and owned by Cellectis. ALLO-501 and ALLO-501A are anti-CD19 AlloCAR T™ therapies being jointly developed under a collaboration agreement between Servier and Allogene based on an exclusive license granted by Cellectis to Servier. Servier grants to Allogene exclusive rights to ALLO-501 and ALLO-501A in the U.S. while Servier retains exclusive rights for all other countries. Allogene has an exclusive license to the Cellectis technology for allogeneic products directed at BCMA, FLT3, DLL3 and CD70.