

Commitment to a Cure

Corporate Presentation

November 2024

NASDAQ: CLLS

EURONEXT GROWTH: ALCLS.PA



Forward-Looking Statements

This presentation contains "forward-looking" statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as "designed to", "anticipate," "expected," "on track," "plan," "scheduled," "should", and "will," "would", or the negative of these and similar expressions.

These forward-looking statements, which are based on our management's current expectations and assumptions and on information currently available to management, including information provided or otherwise publicly reported by our licensed partners. Forward-looking statements advancement, timing and progress of clinical trials (including with respect to patient enrollment and follow-up), the timing of our presentation of data and submission of regulatory filings, the adequacy of our supply of clinical vials, the operational capabilities at our manufacturing facilities, the sufficiency of cash to fund operations, the potential benefit of our product candidates and technologies, the potential payments for which Cellectis is eligible under the agreements signed between Cellectis and each of its partners, including AstraZeneca, Servier, Allogene and Iovance and the financial position of Cellectis.

These forward-looking statements are made in light of information currently available to us and are subject to numerous risks and uncertainties, including with respect to the numerous risks associated with biopharmaceutical product candidate development.

With respect to our cash runway, our operating plans, including product development plans, may change as a result of various factors, including factors currently unknown to us. Furthermore, many other important factors, including those described in our Annual Report on Form 20-F and the financial report (including the management report) for the year ended December 31, 2023 and subsequent filings Cellectis makes with the Securities Exchange Commission from time to time, as well as other known and unknown risks and uncertainties may adversely affect such forward-looking statements and cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.



Cellectis at a Glance



3 Clinical Trials*

75+ patients dosed in Cellectis-sponsored trials



Global GMP Facilities

End-to-end manufacturing autonomy



Near-Term Clinical Catalysts

Multiple near-term UCART clinical data updates



Diversified Partnerships with Industry Leaders



- Revenues > \$6B in milestones + royalties
- 5 clinical trials sponsored by Cellectis' licensed partners













^{*} On November 4, 2024, Cellectis decided to focus its current development efforts on the BALLI-01 and NATHALI-01 studies and therefore to deprioritize the development of UCART123, currently evaluated in relapsed or refractory acute myeloid leukemia.

^{**}Cash position includes cash, cash equivalents, restricted cash and fixed-term deposits classified as current financial assets. Restricted cash was \$5 million as of September 30, 2024. Fixed-term deposits classified as current financial assets was \$100 million as of September 30, 2024.

A Highly-Experienced Executive Committee



André Choulika, Ph.D. Founder & CEO



Steven Doares, Ph.D. SVP, US Manufacturing & Site Head



Phillippe Duchateau, Ph.D. Chief Scientific Officer



Adrian Kilcoyne M.D., MPH, MBA Chief Medical Officer



Kyung Nam-Wortman EVP, Chief Human Resources Officer



Stephan Reynier Chief Regulatory & Pharmaceutical Compliance Officer



David Sourdive, Ph.D. EVP CMC & Manufacturing & Co-Founder



Arthur Stril
Interim Chief Financial Officer



Marie-Bleuenn Terrier General Counsel



UCARTs are Designed to be "Off-The-Shelf"

Scalable Manufacturing



Reduced cost
Scalable manufacturing:
1 batch = 100s doses

Robustness



The goal is to provide potency and consistency to each patient

Off-The-Shelf



Immediately available to all eligible patients

Control Production, Minimize Costs and Improve Patient Safety



Strategic Partnership with AstraZeneca



Cell & Gene Therapy R&D Collaboration



- Develop up to 10 novel products in oncology, immunology and rare diseases
- \$25M upfront
- Milestones from \$70M to \$220M per product with tiered royalties
- AstraZeneca to cover Cellectis' research costs

Investment Agreements

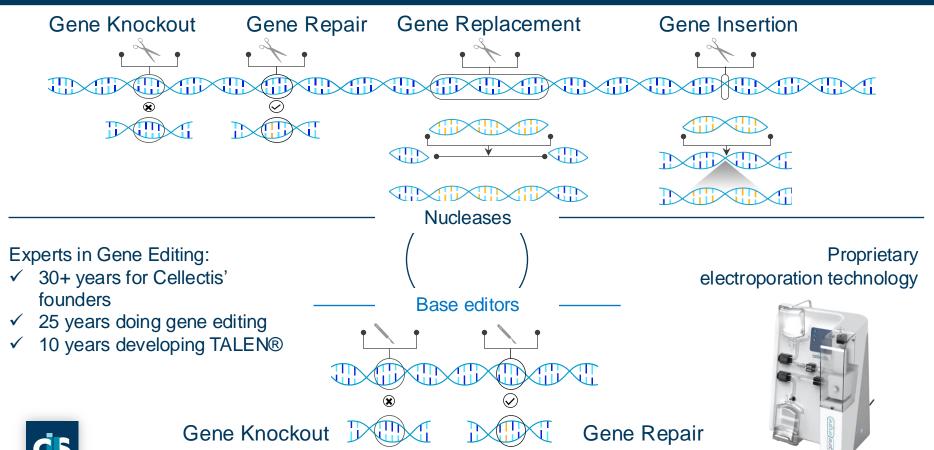


\$220M equity investment (subscribed for 16 million ordinary shares and 28 million convertible preferred shares at \$5.00 per share)

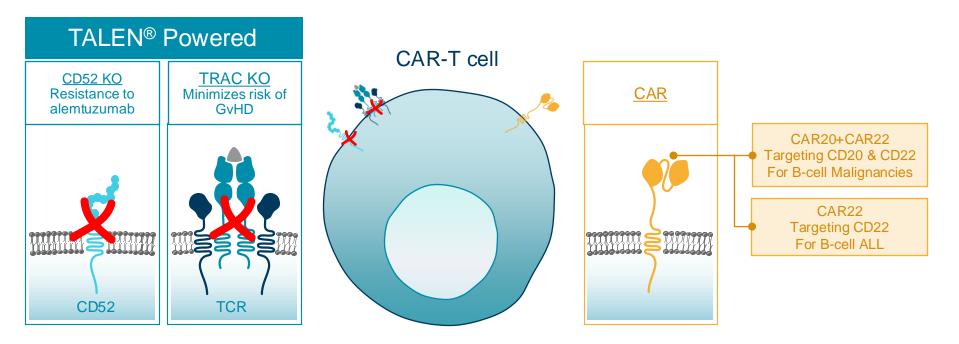


Note: AstraZeneca has nominated two directors to the board of directors of Cellectis. Further, certain business decisions are subject to AstraZeneca's approval. For more information on the agreements signed with AstraZeneca, please refer to the Annual Report filed on Form 20-F and the management report for the year ended December 31, 2023

Powerful and Comprehensive Gene Editing Platform



Cellectis' UCART Candidate Platform





Differentiated Targets & Near-Term Catalysts

Tar get	Indication	Study	Preclinical	Phase 1 Dose Escalation	Phase 1 Dose Expansion	Phase 2 Pivotal ²	Upcoming expected milestone
UCART22 CD22	ALL	BALLI-01 NCT04150497		•			Phase 1 dataset & late-stage development strategy expected in 2025
UCART20x22 Dual Target CD20, CD22	NHL	NatHaLi-01 NCT05607420		•			Phase 1 dataset & late-stage development strategy expected in 2025
Cemacabtagene Ansegedleucel (ALLO-501 A) CD1 91	LBCL	ALPHA3 NTC06500273				•	SERVIER* moved by you
Cemacabtagene Ansegedleucel (ALLO-501 A) CD191	СП	ALPHA2 NCT04416984		•			Allogene.
ALLO-316 ³ CD70	RCC	TRAVERSE NCT04696731		•			Allogene Allogene
Allogeneic CAR T	He matological malignancies		-				
Allogeneic CAR T	Solid tumors		-				AstraZeneca
In vivo gene therapy	Genetic disorder		•				
IOV-4001	Melanoma, NSCLC	IOV-GM1-201 NCT05361174					IOVANCE

¹ cemacabtagene ansegedleucel has been 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 cemacabtagene ansegedleucel in the U.S., EU and UK.

The ALPHA3 and ALPHA2 studies target Large B-Cell Lymphoma (LBCL) and Chronic Lymphocytic Leukemia (CLL), respectively.



² Phase 3 may not be required if Phase 2 is registrational.
3 ALLO-316 utilizes TALEN® gene-editing technology pioneered and owned by Cellectis. Allogene has an exclusive license to the Cellectis technology for allogeneic products directed at the CD70 target. Allogene holds global development and commercial rights for this investigational candidate.

ALLO-715 and ALLO-605 utilize TALE N® gene-editing technology pioneered and owned by Cellectis. Allogene has an exclusive license to the Cellectis technology for allogeneic products directed at the BCMA target. Allogene holds global development and commercial rights for these investigational candidates.



Cellectis' UCART Platform



BALLI-01 Study Design

Key inclusion criteria:

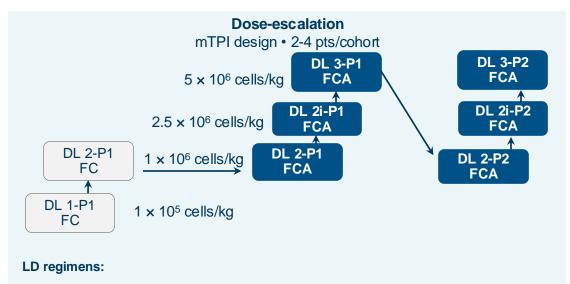
- Age 15–70 years, adequate organ function, ECOG PS ≤1
- B-ALL blast CD22 expression ≥70%
- Received ≥1 standard chemotherapy regimen and 1 salvage regimen

Primary objective:

Safety, tolerability, & MTD of UCART22

Additional objectives:

- Investigator-assessed response
- UCART22 expansion in PB and BM
- Immune reconstitution



- FC: fludarabine 30 mg/m² × 4d + cyclopho sphamide 1 g/m² × 3d
- FCA: fludarabine 30 mg/m² \times 3d + cyclopho sphamide 0.5 g/m² \times 3d + alemtuzumab 20 mg/d \times 3d



UCART22-P1 Administration Shows Promising Tolerable Safety Profile

Patient Characteristics (N=19)

Median age: 28 (17-61)

WHO classification:

 B-ALL with recurrent genetic abnormalities: 8 (42%);

CRFL2 rearrangement: 4 (21%)

Median prior lines of therapy: 4 (2-8)

• Prior blinatumomab: 12 (63%)

Prior inotuzumab: 10 (53%)

Prior CD19 CART: 8 (42%)

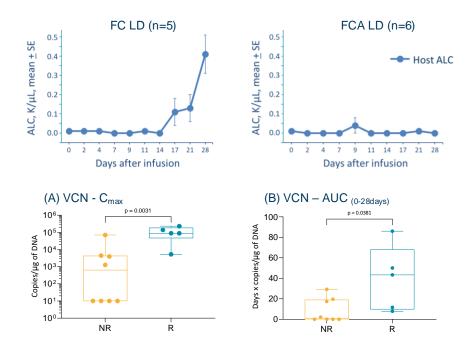
• Prior HSCT: 8 (42%)

Safety: FCA Cohorts (N=13)

- O Dose limiting toxicity
- ICANS (immune effector cell associated neurotoxicity)
- Severe UCART22-related TEAEs (treatment emergent adverse events)
- 11 Patients with mild to moderate CRS (cytokine release syndrome), Grade 1/2
 - O Grade 3 or higher CRS
- 1 Patient with Grade 2 GvHD; skin only*



Promising Clinical Responses with UCART22-P1 and FCA Lymphodepletion



UCART22 vector copy number (VCN) quantified by qPCR from whole blood. Thirteen (13) patients from the FCA cohorts were grouped in responders [R] or not responders [NR]. (A) UCART22 maximum concentration (Cmax) of VCN detected (B) UCART22 VCN area under the curve (AUC) over time (from day 0 through day 28, calculated by linear trapezoidal method by GraphPad. Non-parametric *t*-test was used to calculate the p values using GraphPad.

- Host lymphocytes remained suppressed using FCA lymphodepletion
- 2/7 patients in DL2 and DL2i achieved blast reductions to < 5% by day 28 using FCA lymphodepletion
 - 1 patient in DL2: MRD negative CRi
 - 1 patient in DL2i: MLFS
- **50% ORR observed in DL3** (3/6 patients)* with FCA lymphodepletion
 - 1 patient MRD negative CR
 - 1 patient MRD negative CRi
 - 1 patient MRD negative MLFS

*All 3 of the DL3 responders failed multiple lines of prior therapy including multi-agent chemotherapy, CD19 directed autologous CAR T cell therapy, and allogeneic stem cell transplant. Additionally, 1 of the 3 also failed prior blinatumomab and inotuzumab, and the remaining 2 failed venetoclax based salvage regimens.



Data Source: ASH 2021 Conference Presentation, Cellectis' Live Webcast on 13th December 2022 and EHA 2023 FC: Fludarabine + Cyclophosphamide; FCA: Fludarabine + Cyclophosphamide + Alemtuzumab;

Baseline Characteristics of UCART22-P2 Patients Treated at DL2

3 patients were enrolled into the first UCART22-P2 cohort at DL2

Patient 1

17-year-old female with Ph-negative B-ALL with a hypodiploid karyotype and a germline *TP53* mutation

Prior therapies included multiagent chemotherapy, blinatumomab, inotuzumab, venetoclax, allogeneic stem cell transplantation, and autologous CD19 CAR T-cell therapy (tisagenlecleucel) x 2 infusions

Patient 2

68-year-old female with Ph-negative B-ALL

Relapsed with CD19-low disease after multiagent chemotherapy, blinatumomab, and inotuzumab

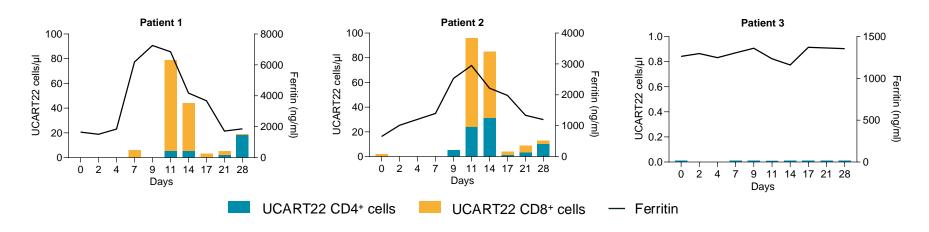
Patient 3

27-year-old male with B-ALL with an ABL2 fusion

Prior therapies included multiagent chemotherapy, blinatumomab, inotuzumab, tyrosine kinase inhibitors, and an experimental autologous CAR19



UCART22-P2 Expansion Correlates with Changes in Ferritin Levels



UCART22-P2 expansion was observed by flow cytometry in the peripheral blood in patient 1 and 2, both at D11, with predominantly CD8 cells expanding, with peaks of:

- ~80 cells/µL in patient 1
- ~100 cells/µL in patient 2
- No UCART22-P2 expansion in patient 3, and ferritin levels mostly unchanged during the 28 days following UCART22-P2 administration



Summary of UCART22-P2 Patients Treated at DL2

Safety

- No dose-limiting toxicities (DLT)
- No immune effector cell-associated neurotoxicity syndrome (ICANS)
- No GvHD
- CRS in 2/3 (67%) patients with one G1 that resolved without treatment and one G2 that resolved after tocilizumab x1
- Patient 1 had a G5 sepsis SAE at D40 considered related to UCART22-P2 and FCA LD

Efficacy

- Responses were assessed beginning on D28
- 2/3 patients (67%) treated at DL2 with UCART22-P2 responded:
 - Patient 1 had 40% BM blasts at screening and achieved an MRD negative MLFS (by flow cytometry and clonoSEQ at 10⁻⁴) up to D40
 - Patient 2 had 80% BM blasts at screening and achieved an MRD negative CR (by clonoSEQ at 10⁻⁴) lasting over 84 days after UCART22 infusion
 - o Patient 3 had 84% BM blasts at screening and was refractory to treatment



NatHaLi-01 Study Design

Key inclusion criteria:

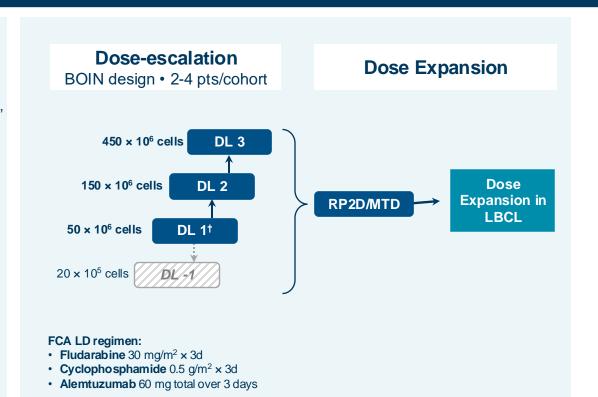
- Age 18–80 years
- Mature B-cell NHL except CLL/SLL, Richter's from CLL/SLL, Burkitt's lymphoma, or Waldenstrom's macroglobulinemia
- Tumor positive for CD20 and/or CD22
- Received ≥2 prior lines including CD19 CART if eligible

Primary objective:

 Safety, tolerability, & MTD/RP2D of UCART20x22

Additional objectives:

- Investigator-assessed response by Lugano
- UCART20x22 expansion in PB
- Immune reconstitution



†Enrollment is ongoing.



BOIN: Bayesian optimal interval; CART: chimeric antigen receptor T-cell the rapy; CLL/SLL: chronic lymphocytic leukemia / small lymphocytic lymphoma, DL: dose level; d: days; FCA: fludarabine + cyclophosphamide + alemtuzumab; LBCL: large B-cell lymphoma, LD: lymphodepletion; MTD: maximum tolerated dose; NHL: Non-Hodgkin Lymphoma; PB: peripheral blood; pts: patients; RP2D: recommended phase 2 dose

Baseline Characteristics

As of 28 July 2023, 3 patients received LD and were treated with UCART20x22 at Dose Level 1 (50 x 10⁶ cells)

	Pt 1	Pt 2	Pt 3	
Age	76	65	18	
Sex	Female	Female	Female	
NHL Subtype	DLBCL	Transformed FL	Transformed MZL	
Genetic/Molecular	Double expressor (BCL2, MYC)	Triple-hit	NOTCH1, PLCG2, CCND3, XBP1	
Antigen Present	CD20+/CD22 unknown	CD20+/CD22 unknown	CD20-/CD22+	
Stage at Screening	IV	IV	IV	
Number of Prior Therapies	2	4	8	
Prior CD19 CART	None	Lisocabtagene maraleucel x2	Axicabtagene ciloleucel	
ECOG	0	0	1	
Baseline Deauville Score	4	5	5	
Disease Status at Screening	Relapsed	Relapsed	Refractory	



Safety Summary

- No UCART20x22-related DLTs
- No ICANS or GVHD was observed
- One CLLS52-related DLT of bone marrow aplasia after Day 42 thought to be due to cumulative chemotherapy exposure in a patient with baseline Grade 1/2 cytopenias and bone marrow hypocellularity at screening
- All patients experienced Grade 1 or 2 CRS that resolved with treatment
 - Pt 1 had Grade 1 CRS for 4 days and was treated with tocilizumab x3 and dexamethasone x1
 - Pt 2 had Grade 2 CRS for 2 days and Grade 1 CRS for 3 days managed with tocilizumab x3 and dexamethasone x1
 - Pt 3 had Grade 1 CRS for 8 days and received tocilizumab x1



UCART20x22 Treatment Response

As of July 28, 2023, 3 patients were treated at dose level 1 (50 \times 10⁶ cells) and were evaluable for response:

Patient 1

76-year-old female with double-expressor DLBCL relapsed after R-CHOP, radiation therapy, and polatuzumab vedotin with bendamustine/rituximab who achieved a <u>partial metabolic</u> <u>response</u> at Day 28

Patient 2

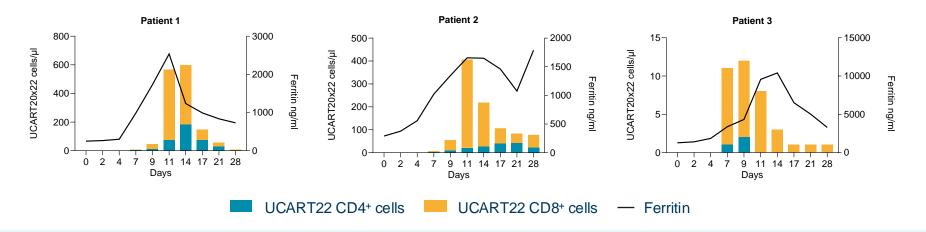
65-year-old female with triple-hit transformed follicular lymphoma previously treated with radiation therapy, bendamustine/rituximab, doseadjusted R-EPOCH, and two lisocabtagene maraleucel infusions who achieved a complete metabolic response at Day 28

Patient 3

18-year-old female with relapsed/refractory transformed marginal zone lymphoma who previously failed chemoimmunotherapy, venetoclax, ibrutinib, bendamustine/rituximab, axicabtagene ciloleucel, obinutuzumab, glofitamab, tafasitamab/lenalidomide, and an experimental epigenetic modifier who achieved a complete metabolic response at Day 28



Robust Expansion of UCART20x22 Cells in Peripheral Blood Correlates with an Increase in Serum Ferritin Levels

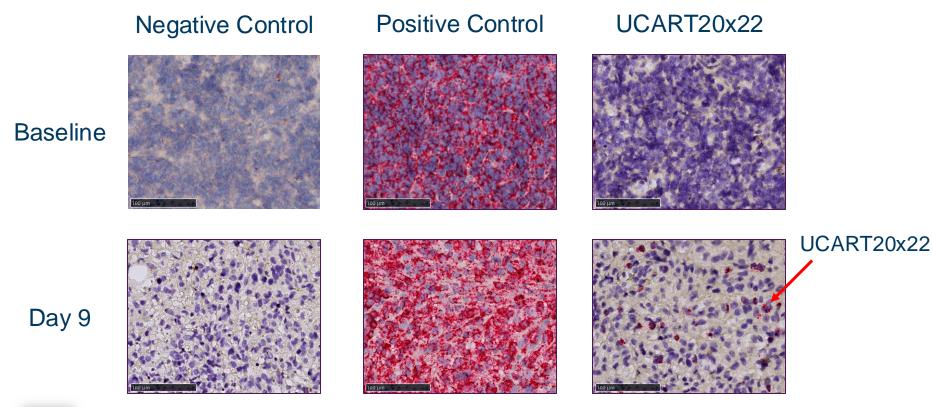


UCART20x22 expansion was observed by flow cytometry in the peripheral blood in all patients, with predominantly CD8+ cells expanding, with peaks of:

- ~600 cells/µL in Patient 1 at Day 14
- ~400 cells/µL in Patient 2 at Day 11
- ~12 cells/ µL in Patient 3 at Day 9



UCART20x22 Cells Detected in Day 9 Post-Treatment Biopsy for Patient 3





UCART Platform Takeaways

GvHD TRAC KO results in safe, non-alloreactive UCART cells **Expansion** CD52 KO + alemtuzumab use in LD has the potential to provide a safe, effective & controllable therapeutic window **Persistence** Encouraging clinical activity in ALL and NHL Safety Profile on par with approved autologous CAR T therapies



Efficacy

Anti-tumor activity consistent with autologous products

Discover, Create, Develop, Produce and Test







New York, New York

Innovation, Clinical Development

25,000 sq ft. facility

- ✓ Gene Editing platform TALEN®
- √ I/O discovery platform
- ✓ Gene therapy discovery platform
- Clinical development



Paris, France

HQ, PD/AD, Starting Materials

55,000 sq ft. facility

- ✓ Process & analytical development
- Raw materials manufacturing
- ✓ QC labs
- ✓ Warehouse
- ✓ Cryogenic Storage rooms



Raleigh, North Carolina

UCART – Clinical & potential for Commercial

82,000 sq ft. facility

- ✓ Cell therapy GMP manufacturing
- ✓ QC labs
- ✓ Warehouse
- ✓ Cryogenic Storage rooms



Upcoming Expected Milestones

UCART22 r/r B-ALL

Phase 1 dataset and late-stage development strategy expected in 2025

UCART20x22 r/r B-NHL

Phase 1 dataset and late-stage development strategy expected in 2025

Partnerships

Updates from licensed partners (AstraZeneca, Servier, Allogene, Iovance, Primera)



Key Takeaways – Why Cellectis?



Innovative Allogeneic CAR T

Breaking Paradigms with Life-Saving Therapies



End-to-End In-House Manufacturing

Owning Manufacturing is Owning the Product



Best-In-Class Gene Editing Platform

Designed to be Safe, Precise & Efficient, Backed by Strong IP



Strong Partnerships

Anticipated Milestones, Diversified Financial Upsides



Thank You

Reach us at: investors@cellectis.com

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Cellectis New York

430 East 29th Street New York, NY, 10016 – USA



Cellectis Raleigh

2500 Sumner Boulevard Raleigh, NC, 27616 – USA





Appendix



Why TALEN®?

	Maturity	Genome Outreach	Recognition Site # base pairs	Chromotrypsis	Precision	Vectorization	IP •
TALEN®	In clinic since 2015	Euchromatin & heterochromatin	32	Not reported	Every 7 base pairs	mRNA	Strong for CLLS
CRISPR	In clinic since 2018	Euchromatin only	~20	Yes	Every 64 base pairs	RNP	Scattered



Diversified Partnerships with Industry Leaders











CAR-T **CD19**

CAR-T BCMA, CD70 + 13 targets

TILs

Mitochondrial **DNA** editing

Cell and gene therapies

Exclusive worldwide license to CD19directed allogeneic CAR T-cells

U.S. rights sublicensed to Allogene by Servier¹

Exclusive worldwide license to 15 allogeneic CAR T-cell targets1

Research collaboration and exclusive worldwide license agreement to develop gene-edited TILs

Collaboration agreement to develop mtDNA gene editing for mitochondrial diseases + option for exclusive worldwide license agreement on up to 5 product

candidates

Joint Research and Collaboration agreement to develop up to 10 novel products in oncology. immunology and rare diseases and investment agree ment

Up to \$410M in Development & Sales Milestones

+ Low Double-Digit Royalties on Sales

Up to \$2.8B in Development & Sales Milestones

+ High Single-Digit Royalties on Sales

Undisclosed Financials

19% equity upfront Option for up to \$750M in Development & Sales

Milestones + High Single-Digit Royalties on Sales

\$25M upfront. Milestones from \$70M to \$220M per product and tiered royalties. \$220M equity investment.

2014

2015

2014

2020

2022

2023

