EDITING LIFE

Commitment to a Cure

Corporate Presentation

November 2023

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 about 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; the possible size of the equity investment by AstraZeneca; 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, the risk that conditions to closing of the AstraZeneca potential additional equity investment, including necessary regulatory approvals, are not satisfied in a timely manner or at all.

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, 2022 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

50+ patients dosed in Cellectis-sponsored trials

Global GMP Facilities

End-to-end manufacturing autonomy

Near-Term Clinical Catalysts

UCART clinical data updates

$72M

***as of September 30, 2023**

Cash Runway into 2026

Diversified Partnerships with Industry Leaders

~220 patients dosed to date

- Revenues > **$4B** in milestones + royalties
- **5 clinical trials** sponsored by Cellectis' licensed partners

AstraZeneca, SERVIER, Allogene THERAPEUTICS, IOVANCE, Cytovia Therapeutics, primera THERAPEUTICS

* Cash position includes cash, cash equivalents and restricted cash. Restricted cash was $5 million as of September 30, 2023.

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

Mark Frattini, M.D., Ph.D.
Chief Medical Officer

Kyung Nam-Wortman
EVP, Chief Human Resources Officer

Stephan Reynier
Chief Regulatory & Compliance Officer

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

Arthur Stril
Chief Business Officer

Marie-Bleuenn Terrier
General Counsel

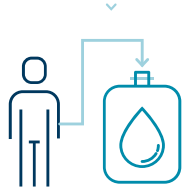
Bing Wang, Ph.D., MBA
Chief Financial Officer

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

Market Access

Immediately available to all eligible patients

Control Production & Costs for Patients Safety and Profitability

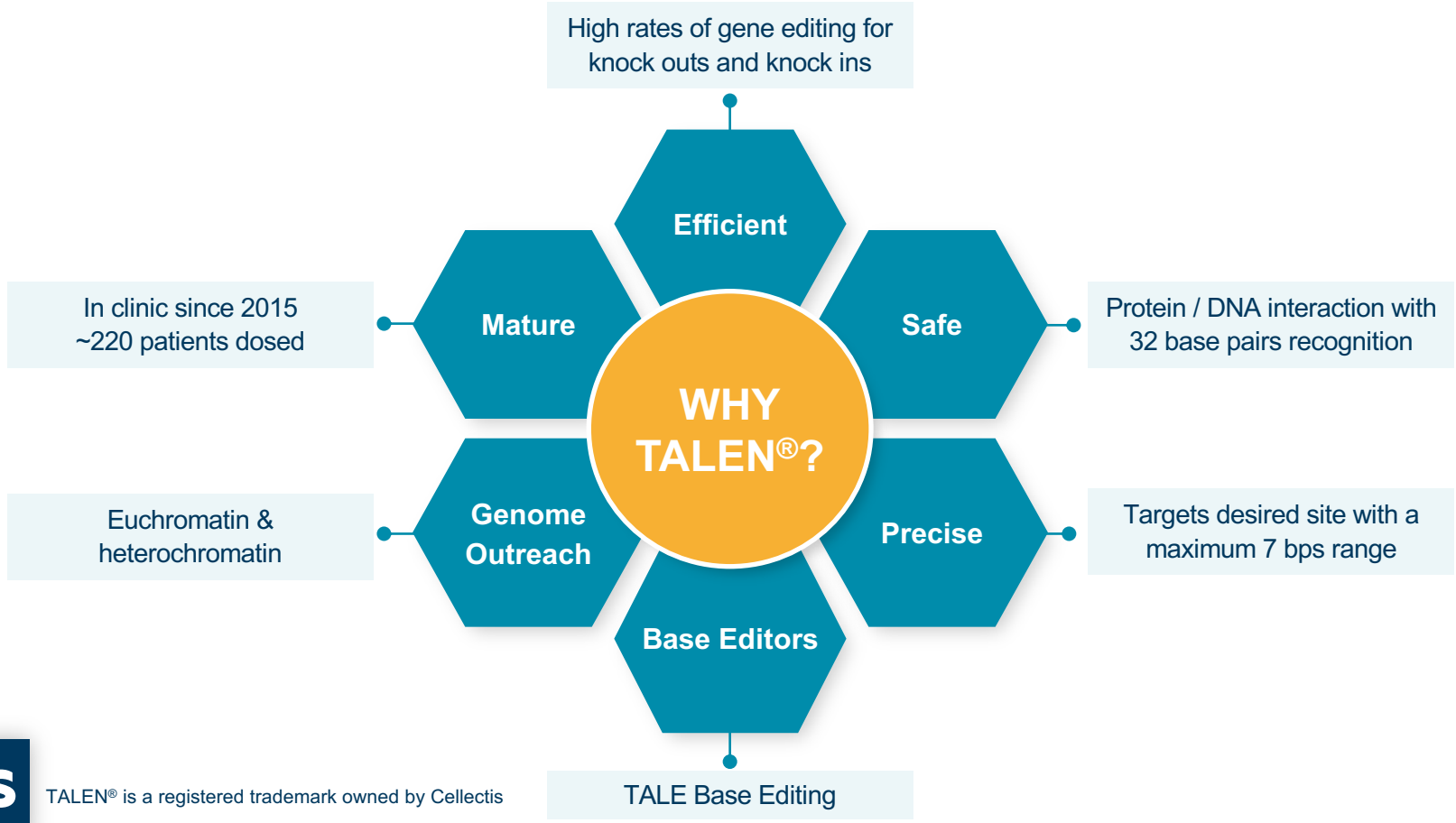
Strategic Partnership With AstraZeneca

- **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, tiered royalties
  - AstraZeneca to cover Cellectis' research costs

- **Investment Agreement**
  - $80M initial equity investment (subscribed for 16 million ordinary shares at $5.00 per share)
  - Potential $140M additional equity investment (28 million convertible preferred shares at $5.00 per share), subject to shareholders' approval, FDI clearance, and other customary closing conditions

Note: Immediately following the Additional Investment, it is anticipated that AstraZeneca would own approximately 44% of the share capital of Cellectis and 30% of the voting rights of Cellectis (based on the number of voting rights outstanding immediately after the completion of the Initial Investment) and would have the right to nominate two directors to the board of directors of Cellectis. Further, certain business decisions are subject to AstraZeneca's approval.

Experts in Gene-Editing Use TALEN®

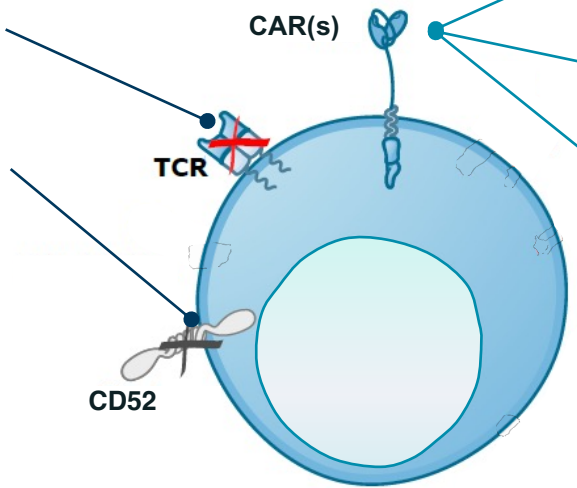


Cellectis' UCART Candidate Platform

TALEN® Powered

TRAC KO
Minimizes risk of GvHD

CD52 KO
Resistance to alemtuzumab



CAR20 + CAR22 — Targeting CD20 & CD22 For B-cell Malignancies

CAR22 — Targeting CD22 For B-cell ALL

CAR123 — Targeting CD123 For AML

ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; KO: Knock-Out; GvHD: Graft Versus Host Disease

Differentiated Targets & Near-Term Catalysts

	Candidate / Target	Indication	Study	Preclinical	Phase 1 Dose Escalation	Phase 1 Dose Expansion	Pivotal Phase[2]	Upcoming Expected Milestones
Fully Owned	UCART22 CD22	ALL	BALLI-01 NCT04150497					Data update with in-house manufactured product
	UCART123 CD123	AML	AMELI-01 NCT03190278					Data update with 2-dose regimen
	UCART20x22 Dual Target CD20, CD22	NHL	NatHaLi-01 NCT05607420					First in-human data update
								Licensed to:
Licensed Partners	ALLO-501A[1] CD19	LBCL	ALPHA2 NCT04416984					SERVIER; Allogene THERAPEUTICS U.S. rights
	ALLO-715[3] BCMA	MM	UNIVERSAL NCT04093595					Allogene THERAPEUTICS
	ALLO-605[3] BCMA	MM	IGNITE NCT05000450					
	ALLO-316[4] CD70	RCC	TRAVERSE NCT04696731					

ALL, Acute Lymphoblastic Leukemia; AML, Acute Myeloid Leukemia; NHL, Non-Hodgkin's Lymphoma; RCC, Renal Cell Carcinoma, LBCL, Large B-Cell Lymphoma

1 ALLO-501A is exclusively licensed to Servier and under a joint clinical development program between Servier and Allogene. The ALPHA2 study targets Large B-Cell Lymphoma (LBCL)
2 Phase 3 may not be required if Phase 2 is registrational.
3 ALLO-715 and ALLO-605 utilize TALEN® 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 this investigational candidate.
4 CD70 is a licensed target from Cellectis. ALLO-316 utilize 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.

Cellectis' UCART Platform

BALLI-01 Study Design (NCT04150497)

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:

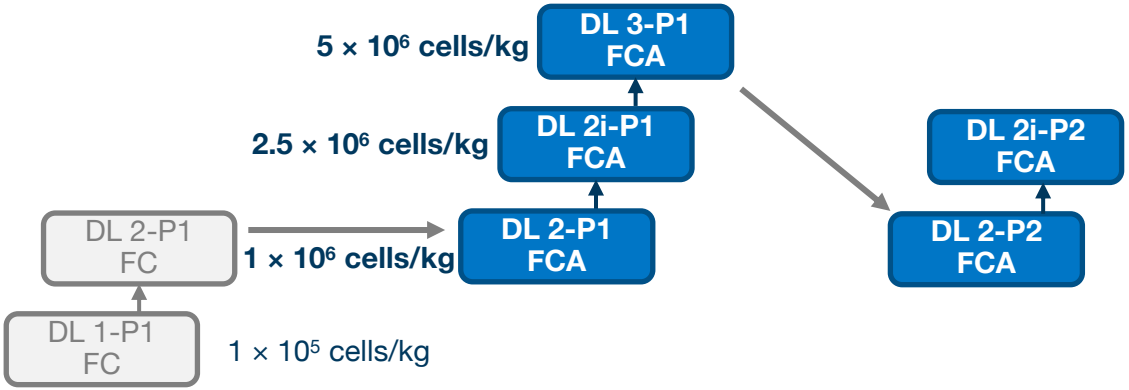
- Safety, tolerability, & MTD of UCART22

Additional objectives:

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

Dose-escalation

mTPI design • 2-4 pts/cohort



LD regimens:

- **FC: fludarabine** 30 mg/m^2 × 4d + **cyclophosphamide** 1 g/m^2 × 3d
- **FCA: fludarabine** 30 mg/m^2 × 3d + **cyclophosphamide** 0.5 g/m^2 × 3d + **alemtuzumab** 20 mg/d × 3d

P1 cells manufactured by external CDMO. P2 cells manufactured by Cellectis Biologics.

B-ALL, B-cell acute lymphoblastic leukemia; BM, bone marrow; DL, dose level; d, days; ECOG PS, Eastern Cooperative Oncology Group performance status; FC, fludarabine + cyclophosphamide; FCA, FC + alemtuzumab; LD, lymphodepletion; MTD, maximum tolerated dose; mTPI, modified Toxicity Probability Interval; PB, peripheral blood; pts, patients.

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)

0 dose limiting toxicity

0 ICANS (immune effector cell associated neurotoxicity)

0 severe UCART22-related TEAEs (treatment emergent adverse events)

11 patients with mild to moderate CRS (cytokine release syndrome), Grade 1/2

0 Grade 3 or higher CRS

1 patient with Grade II GvHD; skin only*

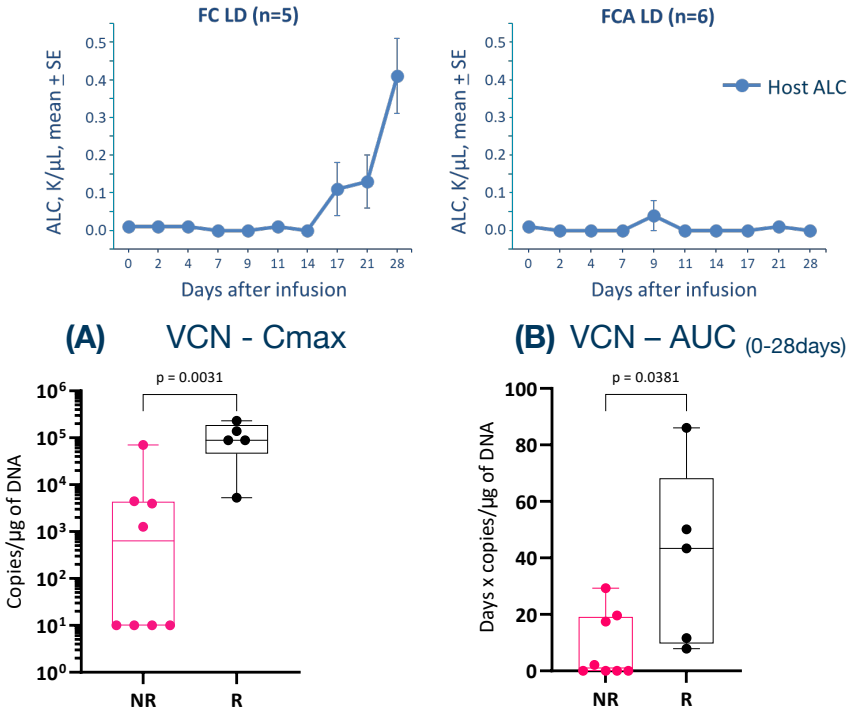
*not confirmed by biopsy; in context of re-activation of prior allogeneic bone marrow donor stem cells

Data Source: ASH 2021 Conference Presentation, Cellectis' Live Webcast on 13th December 2022 and EHA 2023

CRFL2: Cytokine Receptor-Like Factor 2 ; FCA: Fludarabine, Cyclophosphamide, Alemtuzumab ; ICANS: Immune effector Cell-Associated Neurotoxicity Syndrome ; TEAE: Treatment Emergent Adverse Event

CRS: Cytokine Release Syndrome ; GvHD: Graft versus Host Disease; WHO: World Health Organization; HSCT: Hematopoietic Stem Cell Transplantation, ALL: Acute Lymphoblastic Leukemia

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;

LD: Lymphodepletion; DL2: Dose Level 2; DL2i: Intermediate Dose Level 2; DL3: Dose Level 3; BM: Bone Marrow; MRD: Minimal Residual Disease; CR: Complete Response; CRi: Complete Response with Incomplete Count Recovery; MLFS: Morphologic Leukemia-Free

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

Summary of UCART22-P2 Patients Treated at DL2

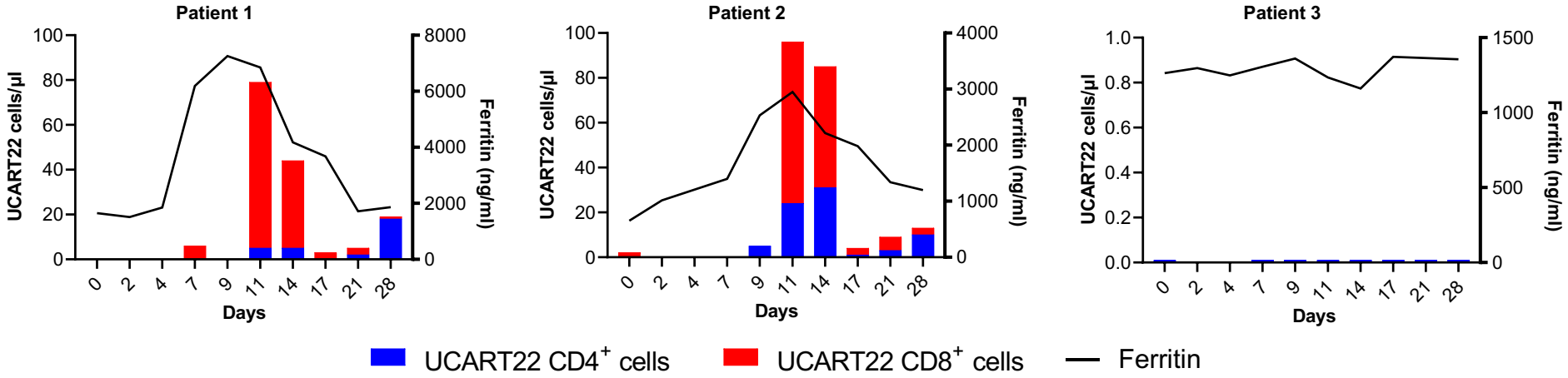
Safety

- 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** (by flow cytometry and clonoSEQ at 10^{-4}) **MLFS** up to D40
  - Patient 2 had 80% BM blasts at screening and achieved an **MRD negative** (by clonoSEQ at 10^{-4}) **CR** lasting over 84 days after UCART22 infusion
  - Patient 3 had 84% BM blasts at screening and was refractory to treatment

UCART22-P2 Expansion Correlates with Changes in Ferritin Levels



UCART22-P2 expansion was observed by flow cytometry in the peripheral blood with peaks of ~80 cells/µL in patient 1 and ~100 cells/µL in patient 2, both at D11, with predominantly CD8 cells expanding.
For patient 3, no UCART22-P2 expansion was observed, and ferritin levels were mostly unchanged during the 28 days following UCART22-P2 administration.

Patient 1: CRS G1 D4-5; G2 D5-6. Patient 2: CRS G1 D4-5, D7-8, and D10-11. Patient 3: no CRS

NatHaLi-01 Study Design (NCT05607420)

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:

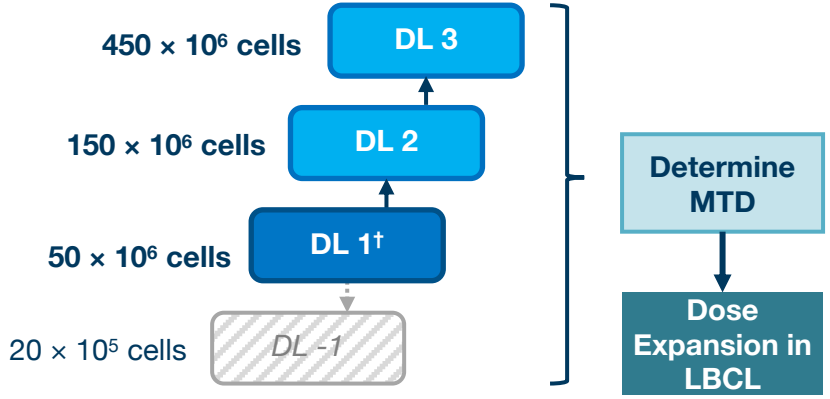
- Safety, tolerability, & MTD/RP2D of UCART20x22

Additional objectives:

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

Dose-escalation

BOIN design • 2-4 pts/cohort



FCA LD regimen:

- **Fludarabine** 30 mg/m^2 × 3d
- **Cyclophosphamide** 0.5 g/m^2 × 3d
- **Alemtuzumab** 60 mg total over 3 days

†Enrollment is ongoing.

BOIN, Bayesian optimal interval; CART, chimeric antigen receptor T-cell therapy; DL, dose level; d, days; FCA, fludarabine + cyclophosphamide + alemtuzumab; LBCL, large B-cell lymphoma, LD, lymphodepletion; MTD, maximum tolerated dose; 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

	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

CART, chimeric antigen receptor T-cell therapy; DLBCL, diffuse large B-cell lymphoma; ECOG PS, Eastern Cooperative Oncology Group performance status; FL, follicular lymphoma; LD, lymphodepletion; MZL, marginal zone lymphoma

Safety Summary

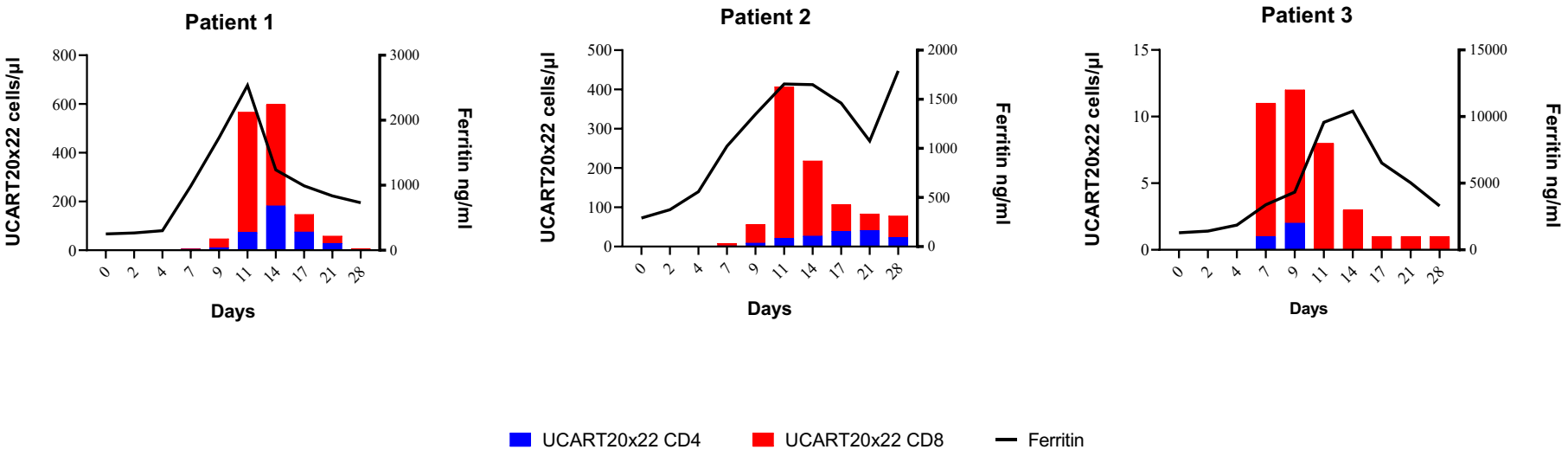
- No UCART20x22-related DLTs
- No ICANS or GVHD was observed
- One CLLS52-related DLT of bone marrow aplasia after Day 42 thought to be due to cumulative chemotherapy exposure in a patient with baseline grade 1/2 cytopenias and bone marrow hypocellularity at Screening
- All patients experienced grade 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 and were evaluable for response:

- Pt 1 is a 76-year-old female with double-expressor DLBCL relapsed after R-CHOP, radiation therapy, and polatuzumab vedotin with bendamustine/rituximab who achieved a **partial metabolic response** at Day 28
- Pt 2 is a 65-year-old female with triple-hit transformed follicular lymphoma previously treated with radiation therapy, bendamustine/rituximab, dose-adjusted R-EPOCH, and two lisocabtagene maraleucel treatments who achieved a **complete metabolic response** at Day 28
- Pt 3 is an 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 Ferritin Levels



UCART20x22 expansion was observed by flow cytometry in the peripheral blood in all patients, with peaks of ~600 cells/µL in Patient 1 at Day 14, ~400 cells/µL in Patient 2 at Day 11, and ~12 cells/ µL in Patient 3 at Day 9, with predominantly CD8+ cells expanding.

UCART123 – AMELI-01 Trial Design

Phase I, Open Label Dose-escalation and Dose-expansion Study to Evaluate the Safety, Expansion, Persistence and Clinical Activity of UCART123 in Patients with Relapsed or Refractory Acute Myeloid Leukemia

Key Eligibility Criteria

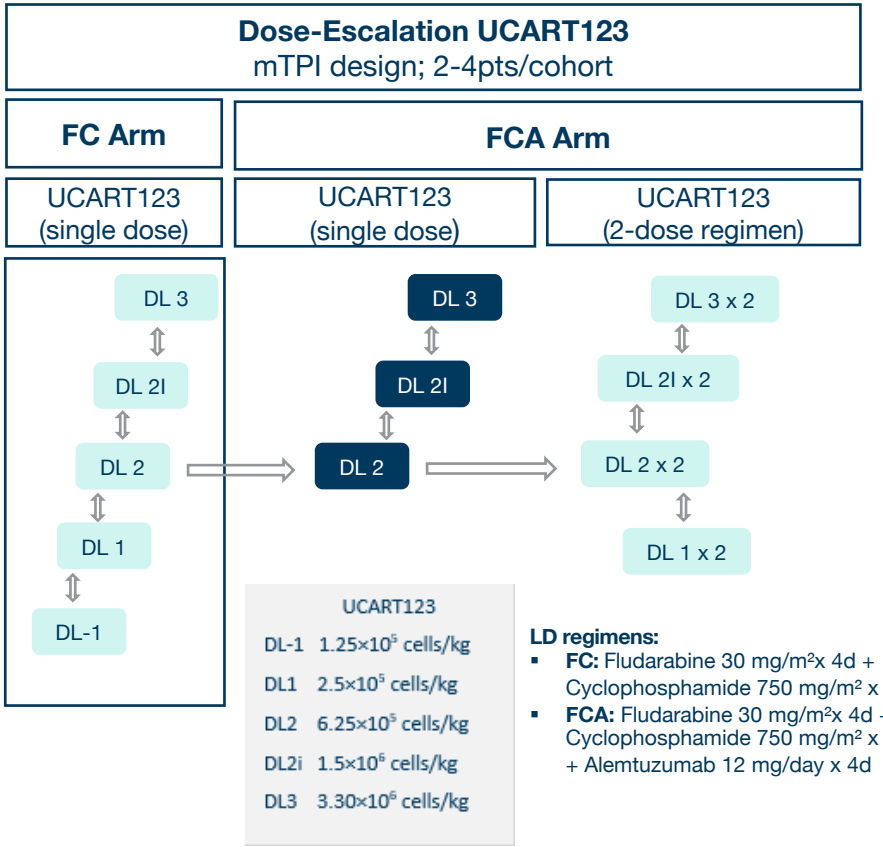
- Relapsed or primary refractory AML (>5% bone marrow blasts)
- Blasts expressing CD123
- ECOG PS of ≤1 and adequate organ function

Primary Objective

- Safety, tolerability, & MTD/RP2D of UCART123

Additional Objectives

- Investigator-assessed response
- UCART123 expansion, trafficking, persistence in PB and BM
- Immune reconstitution



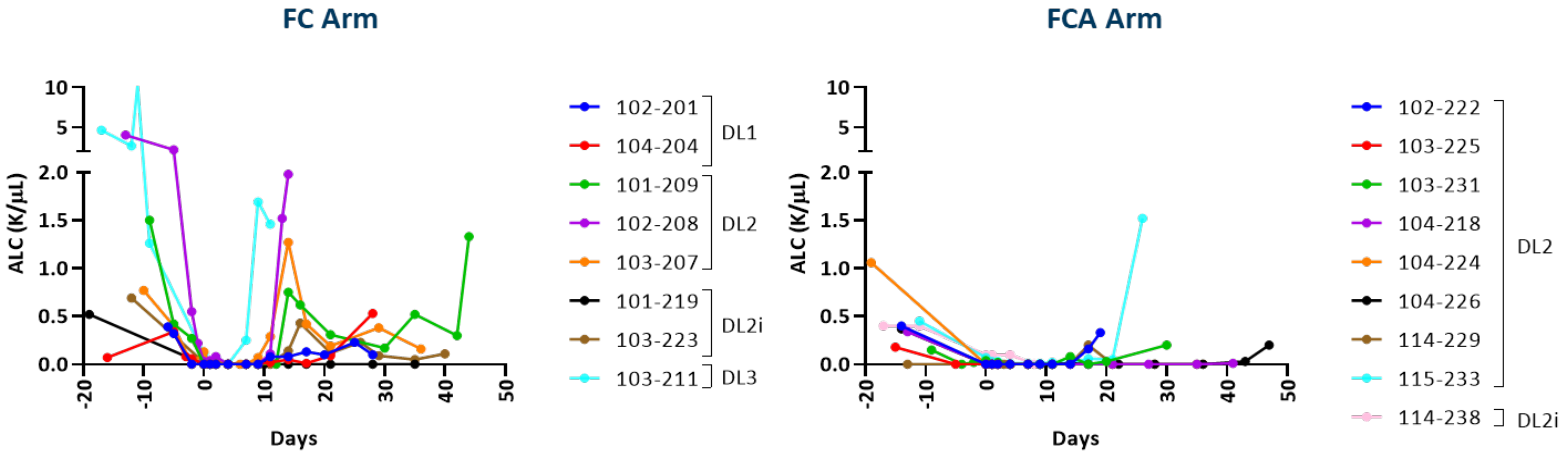
LD regimens:

- **FC:** Fludarabine 30 mg/m²x 4d + Cyclophosphamide 750 mg/m² x 3d
- **FCA:** Fludarabine 30 mg/m²x 4d + Cyclophosphamide 750 mg/m² x 3d + Alemtuzumab 12 mg/day x 4d

Data Source: ASH 2022 Conference Presentation
NCT04106076
MTD, Maximum Tolerated Dose; RP2D, Recommended Phase 2 Dose; DL, Dose Level; PS, Performance Status; mTPI, modified Toxicity Probability Interval; LD, Lymphodepletion; AML: Acute Myeloid Leukemia; DL1: Dose Level 1; DL2i: Intermediate Dose Level 2; ; FC: Fludarabine and Cyclophosphamide; FCA: Fludarabine, Cyclophosphamide and Alemtuzumab; pts: patients; PB: Peripheral Blood; BM: Bone Marrow

Addition of Alemtuzumab Results in Prolonged Host Lymphodepletion in AMELI-01

Absolute Lymphocyte Counts

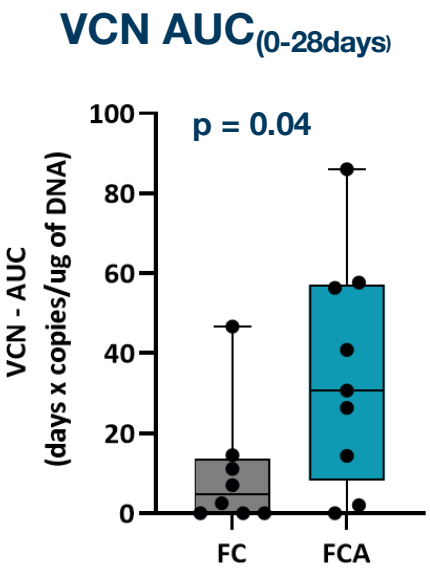


Data Source: ASH 2022 Conference Presentation

FC: Fludarabine + Cyclophosphamide; FCA: Fludarabine + Cyclophosphamide + Alemtuzumab;
LD: Lymphodepletion; DL2: Dose Level 2; DL2i: Dose Level 2 Intermediate

Anti-Leukemic Activity and Robust CAR T-Cell Expansion Observed using FCA Lymphodepletion

Addition of alemtuzumab resulted in increased UCART123 expansion



2 responses observed in FC arm
- Patient **101-219** (DL2i): SD
- Patient **103-223** (DL2i): MLFS

2 responses observed in FCA arm
- Patient **114-229** (DL2): SD
  - Achieved greater than 90% BM blast reduction (60% to 5%) at Day 28
- Patient **104-226** (DL2): MRD negative CR
  - Achieved CRi at Day 28 followed by MRD negative CR at Day 56 that has **remained durable for over 1 year**

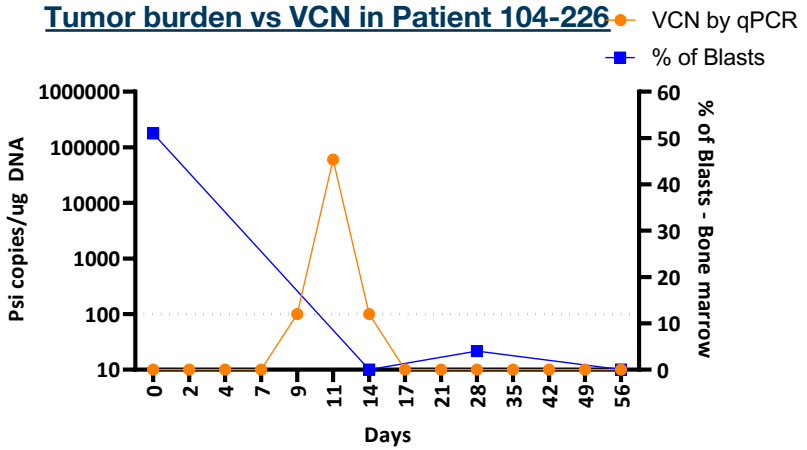
Data Source: ASH 2022 Conference Presentation

FC: Fludarabine + Cyclophosphamide; FCA: Fludarabine + Cyclophosphamide + Alemtuzumab; AUC: Area Under Curve; DL2: Dose Level 2; DL2i: Dose Level 2 Intermediate; BM: Bone Marrow; MRD: Minimal Residual Disease; CR: Complete Response; CRi: Complete Response with Incomplete Count Recovery; MLFS: Morphologic Leukemia-Free; SD: Stable Disease; VCN: Vector Copy Number

Patient 104-226 Achieved a Durable MRD Negative Complete Response

Clinical Characteristics	
Age, Race, Sex	64-year-old white female
ECOG PS	1
ELN 2017 Classification; WHO Classification	Adverse risk; AML with myelodysplasia-related changes
Cytogenetic and Molecular Abnormalities	45,XX,-7,t(10;12)(q24;p13)[5]; IDH1, EZH2
Number of prior treatments	5 - including allogeneic HSCT 2016
Past Medical History	MDS, 2011; Focal nodular hyperplasia of the liver, 2016

Response Summary	BM Biopsy Blast %	BM Aspirate Blast %	MRD	ELN Response
Screening Day -14	51%	Not done		
Day 14	0%	Not done		
Day 28	3.8%	4%	Pos 0.6%	CRi
Day 56	2.8%	0%	Neg	CR
Day 84	0%	0%	Neg	CR
FU 1, Day 181	2%	0%	Neg	CR
FU 2, Day 270	1%	0%	Neg	CR
FU 3, Day 365	0%	0%	Neg	CR



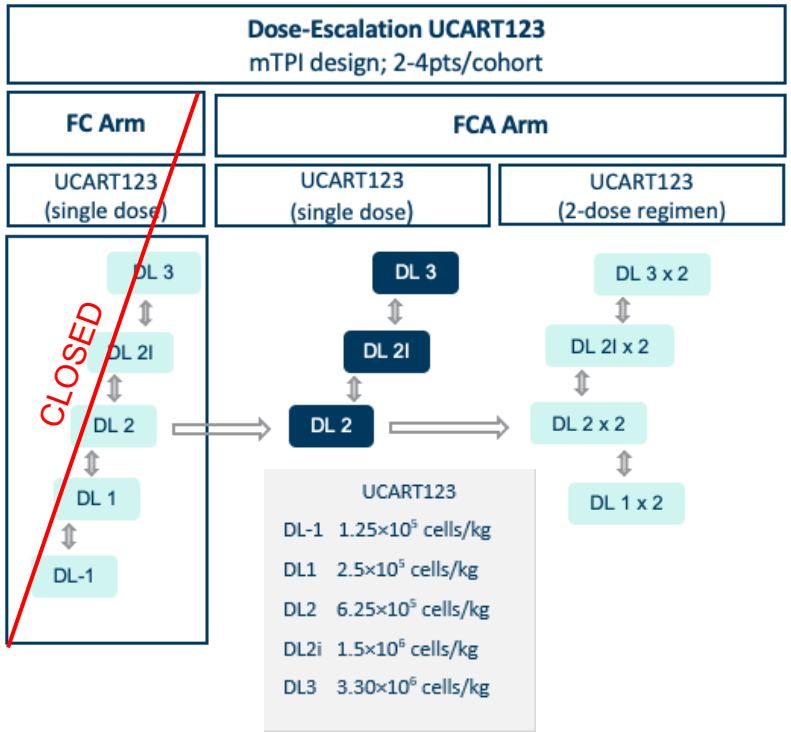
Data Source: ASH 2022 Conference Presentation

MDS myelodysplastic syndrome; HSCT Hemopoietic stem cell transplant; MRD minimal residual disease; BM: Bone Marrow; AML: Acute Myeloblastic Leukemia; ELN: European LeukemiaNet; ECOG PS: Eastern Cooperative Oncology Group Performance Status

Translational Data Supports Use of a Two-Dose Regimen of UCART123

- UCART123 expansion correlates with reduction in tumor burden at DL2 (6.25 x 10^5 cells/kg) but at this dose, UCART123 cell function is not sufficient for sustained anti-leukemic activity in all patients
- A second dose would then be given to allow for additional UCART123 expansion and clinical activity after 10-14 days without the use of additional lymphodepletion
- The second peak of expansion in the setting of reduced disease burden is expected to be safe and should allow for clearance of residual disease
- AMELI-01 study has commenced enrolling patients in the FCA 2-dose regimen arm at DL2, a dose that has already been administered and cleared for safety as a single dose, and incorporate the use of prophylactic tocilizumab prior to UCART123 cell dosing

AMELI-01 Amended Protocol with Two-Dose Regimen Design



Data Source: ASH 2022 Conference Presentation

DL1: Dose Level 1; DL2i: Intermediate Dose Level 2 ; FC: Fludarabine and Cyclophosphamide; FCA: Fludarabine, Cyclophosphamide and Alemtuzumab; pts: patients; mTPI: modified Toxicity Probability Interval

UCART Platform Takeaways from ~220 Patients*

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, AML, and NHL
Safety	Profile on par with approved autologous CAR T therapies
Efficacy	Anti-tumor activity consistent with autologous products

Includes fully owned and partnered assets
NHL: Non-Hodgkin Lymphoma; ALL: Acute Lymphoblastic Leukemia; AML: Acute Myeloid Leukemia; GvHD: Graft Versus Host Disease; KO: Knock-Out; LD: Lymphodepletion

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

Expected Milestones

UCART22 r/r B-ALL

Data update with in-house manufactured product

UCART123 r/r AML

Data update with 2-dose regimen

UCART20x22 r/r B-NHL

First in-human data update

Partnerships

Updates from licensed partners (Servier/Allogene, Iovance, Cytovia and Primera)

ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; DL, dose level; FC, fludarabine + cyclophosphamide; NHL, non-Hodgkin lymphoma; r/r, relapsed/refractory.

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	Safe, Precise & Efficient, Backed by Strong IP
Strong Partnerships	Anticipated Milestones, Diversified Financial Upsides

IP: Intellectual Property

Thank You

Reach us at:
investors@cellectis.com

Cellectis Paris
8, rue de la Croix Jarry 75013
Paris – France

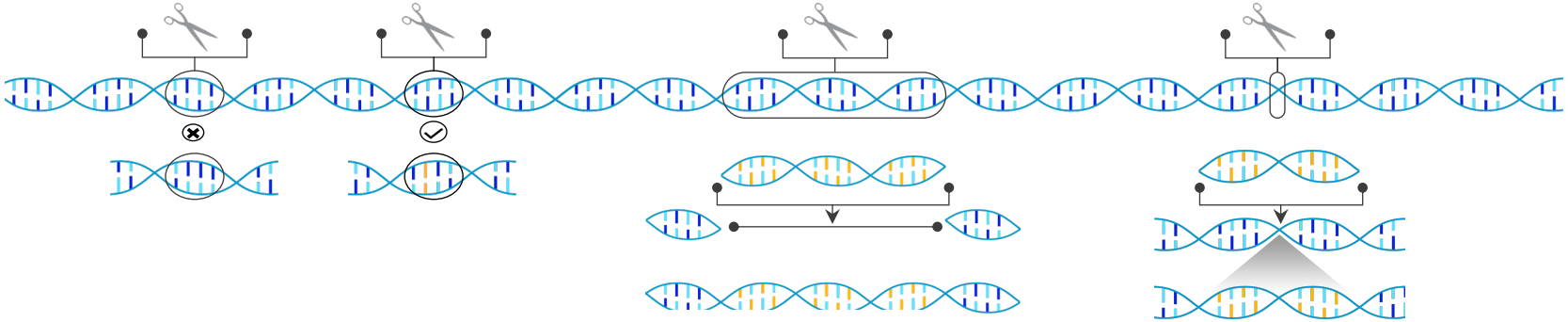
Cellectis New York
430 East 29th Street
New York, NY, 10016 – USA

Cellectis Raleigh
2500 Sumner Boulevard
Raleigh, NC, 27616 – USA

Appendix

Powerful and Comprehensive Gene Editing Platform

Gene Knockout | Gene Repair | Gene Replacement | Gene Insertion

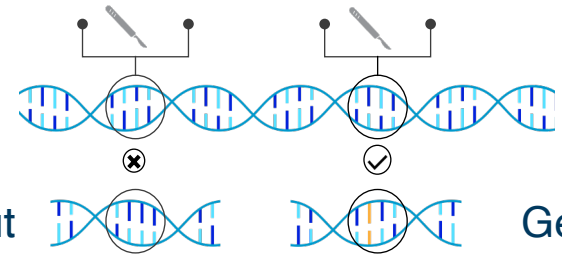


Nucleases

Experts in Gene Editing:

- ✓ 30+ years for Cellectis' founders
- ✓ 22 years doing gene editing
- ✓ 10 years developing TALEN®

Base editors



Gene Knockout | Gene Repair

Proprietary electroporation technology

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	Scatter ed

RNP: Ribonucleoprotein; mRNA: Messenger RNA

Diversified Partnerships with Industry Leaders (1/2)

2014	SERVIER	Exclusive worldwide license to CD19-directed allogeneic CAR T-cells	**CAR T CD19**	Up to $410M in Development & Sales Milestones + Low Double-Digit Royalties on Sales
2015[1]	Allogene THERAPEUTICS	U.S. rights sublicensed to Allogene by Servier		
2014[1]	Allogene THERAPEUTICS	Exclusive worldwide license to 15 allogeneic CAR T-cell targets	**CAR T BCMA CD70**	Up to $2.8B in Development & Sales Milestones + High Single-Digit Royalties on Sales
2020	IOVANCE BIOTHERAPEUTICS	Research collaboration and exclusive worldwide license agreement to develop gene-edited TILs	**TILs**	Undisclosed Financials
2021	Cytovia Therapeutics	Worldwide research collaboration and license agreement to develop gene-edited iPSC-derived NK and CAR-NK cells	**iPSC-derived NK**	$20M Upfront Convertible Note Up to $805M in Development & Sales Milestones + Single-Digit Royalties on Sales

1 Initially granted to Pfizer, Inc. In 2018, Pfizer and Allogene Therapeutics, Inc. entered into an asset contribution agreement pursuant to which Allogene purchased Pfizer's portfolio of assets related to allogeneic CAR T-cell therapy, including the CD19 US rights sublicensed by Servier, and the exclusive worldwide license to 15 allogeneic CAR-T targets.

TIL: Tumor-Infiltrating Lymphocyte; iPSC: Induced Pluripotent Stem Cells; NK: Natural Killer

Diversified Partnerships with Industry Leaders (2/2)

2022	primera THERAPEUTICS	Collaboration agreement to develop mtDNA gene editing for mitochondrial diseases + option for exclusive worldwide license agreement on up to 5 product candidates	**mtDNA editing**	19% equity upfront Option for up to $750M in Development & Sales Milestones + High Single-Digit Royalties on Sales

mtDNA: Mitochondrial DNA