UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **January 13, 2020**

Lineage Cell Therapeutics, Inc.
(Exact name of registrant as specified in charter)

California	**1-12830**	**94-3127919**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

2173 Salk Avenue, Suite 200 **Carlsbad, California** (Address of principal executive offices)	**92008** (Zip Code)

(442) 287-8990
Registrant's telephone number, including area code

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock	**LCTX**	**NYSE American**

Indicate by check mark whether the registrant is an emerging growth company as defined in as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01. Regulation FD Disclosure

Lineage Cell Therapeutics, Inc. ("***Lineage***") will participate in meetings with analysts and investors during the J.P. Morgan 38th Annual Healthcare Conference in San Francisco, California, from January 13, 2020 through January 16, 2020. During those meetings, Lineage will use a presentation handout, which is furnished as Exhibit 99.1 and is incorporated herein by reference. The presentation handout will also be made available in the "Investors" section of Lineage's website, located at investor.lineagecell.com.

Lineage undertakes no duty or obligation to publicly update or revise the information contained in this report, although it may do so from time to time through the filing of other reports or documents with the Securities Exchange Commission, through press releases, or through other public disclosure, including in the "Investors" section of Lineage's website. Lineage routinely uses its website as a means of disclosing material non-public information and for complying with its disclosure obligations under Regulation FD.

The information in this Item 7.01 and Exhibit 99.1 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	January 2020 corporate presentation handout.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Lineage Cell Therapeutics, Inc.

Date: January 13, 2020

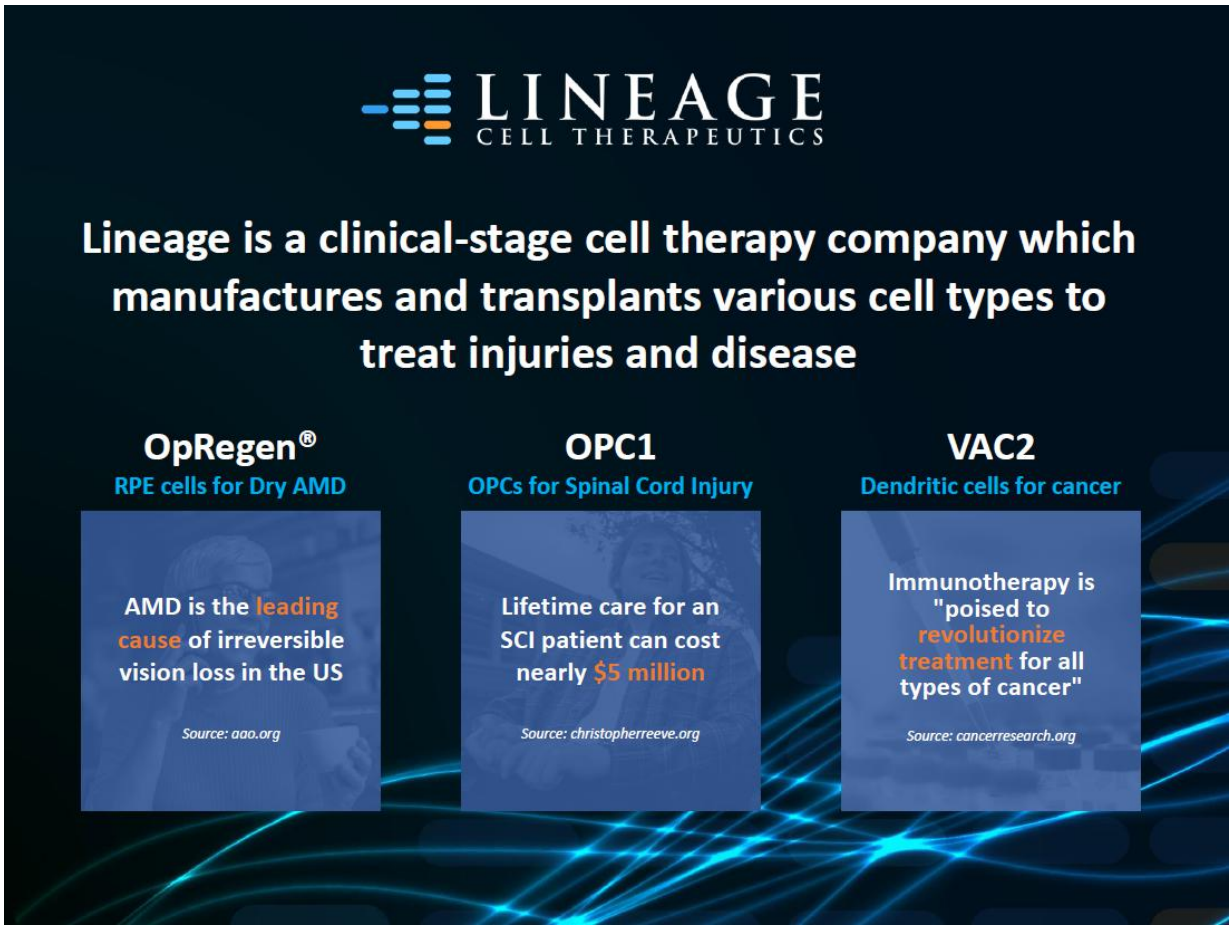
By: */s/ Chase C. Leavitt*
Name: Chase C. Leavitt
Title: General Counsel and Corporate Secretary


LINEAGE
CELL THERAPEUTICS
www.lineagecell.com
Lineage Cell Therapeutics
Corporate Overview
January 13, 2020
NYSE American: LCTX

Forward-Looking Statements

This presentation is for informational purposes only and is not an offer to sell or a solicitation of an offer to buy any securities of Lineage Cell Therapeutics, Inc. ("Lineage"). This presentation includes certain information obtained from trade and statistical services, third-party publications, and other sources. Lineage has not independently verified such information and there can be no assurance as to its accuracy.

All statements in this presentation, other than statements of historical fact, are forward-looking statements within the meaning of federal securities laws. In some cases, you can identify forward-looking statements by terms such as "may," "will," "expect," "plan," "anticipate," "strategy," "designed," "could," "intend," "believe," "estimate," "target," or "potential" and other similar expressions, or the negative of these terms. Forward-looking statements involve risks, uncertainties and assumptions that may cause Lineage's actual results, performance, or achievements to be materially different from those expressed or implied by the forward-looking statements in this presentation, including risks and uncertainties inherent in Lineage's business and other risks described in Lineage's filings with the Securities and Exchange Commission (SEC). Lineage's forward-looking statements are based upon its current expectations and involve assumptions that may never materialize or may prove to be incorrect. All forward-looking statements are expressly qualified in their entirety by these cautionary statements. Further information regarding these and other risks is included under the heading "Risk Factors" in Lineage's periodic reports filed with the SEC, including Lineage's Annual Report on Form 10-K filed with the SEC on March 14, 2019 and its other reports, which are available from the SEC's website. You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date on which they were made. Lineage undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made, except as required by law.


LINEAGE
CELL THERAPEUTICS
Lineage is a clinical-stage cell therapy company which manufactures and transplants various cell types to treat injuries and disease
OpRegen®
RPE cells for Dry AMD
AMD is the leading cause of irreversible vision loss in the US
Source: aao.org
OPC1
OPCs for Spinal Cord Injury
Lifetime care for an SCI patient can cost nearly $5 million
Source: christopherreeve.org
VAC2
Dendritic cells for cancer
Immunotherapy is "poised to revolutionize treatment for all types of cancer"
Source: cancerresearch.org

Why Invest in Lineage?

Lineage is well-positioned for near-term growth and long-term value

3 clinical-stage programs with billion dollar potential

World class in-house GMP manufacturing

One of the largest patent portfolios in cell therapy

Funded well into 2021* with cost-efficient business model

Leader in the emerging field of regenerative medicine

LINEAGE CELL THERAPEUTICS

** Assumes payment of $24.6M note receivable from Juvenescence due August 30, 2020.*

Our Cell Therapy Programs

Three Allogeneic ("Off-the-Shelf") Treatments for Three Serious Conditions

OpRegen®

RPE cells for Dry Age-Related Macular Degeneration with GA (dry AMD)

Phase 1/2a
Nearing Completion

OPC1

Oligodendrocytes for Spinal Cord Injury (SCI)

Phase 1/2a
Completed

VAC2

Dendritic cells for Oncology (Non-Small Cell Lung Cancer, NSCLC)

Phase 1
Ongoing

Backed by hundreds of cell therapy-related patents and patent applications, including both ES & iPS technologies

LINEAGE CELL THERAPEUTICS

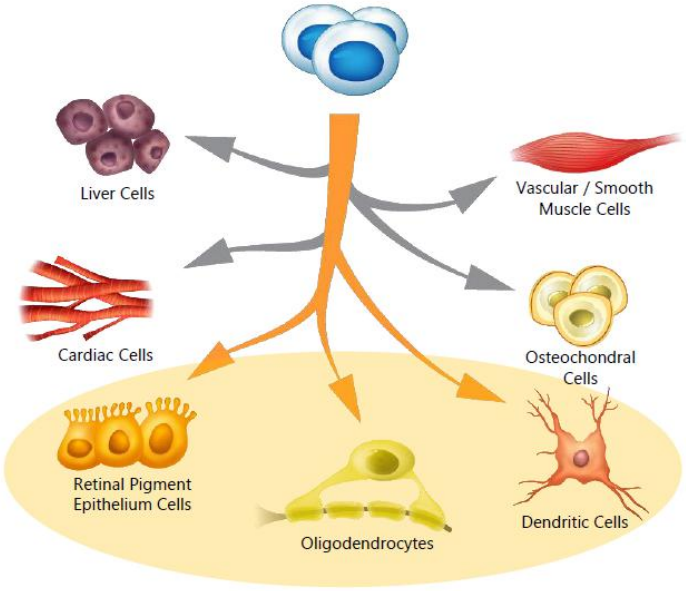
Validating Partnerships and Funding

Programs	Phase I	Phase II	Partnerships & External Funding
OpRegen® Dry Age-Related Macular Degeneration with GA (Dry AMD)	→	→	רשות החדשנות Israel Innovation Authority **$16M**
OPC1 Spinal Cord Injury (SCI)	→	→	CIRM CALIFORNIA STEM CELL AGENCY **>$14M**
VAC2 Non-Small Cell Lung Cancer (NSCLC)	→		CANCER RESEARCH UK **>$10M in-kind**

LINEAGE CELL THERAPEUTICS

Lineage Technology Platform

- The Lineage Platform starts with *normal pluripotent cell lines*
- Pluripotent cells have the capacity to become *any* human cell type
- A highly controlled process generates *only* the desired cell type
- No genomic manipulation or epigenetic memory risks
- Frozen cell banks enable commercial production and are not limited by donor availability



CURRENT CLINICAL PROGRAMS

LINEAGE CELL THERAPEUTICS

Technology Partners & Collaborators

In-House cGMP Production Capabilities

Extensive experience directing the lineage of pluripotent cells into terminally differentiated, specialized cell types such as retinal cells, glial cells, etc.

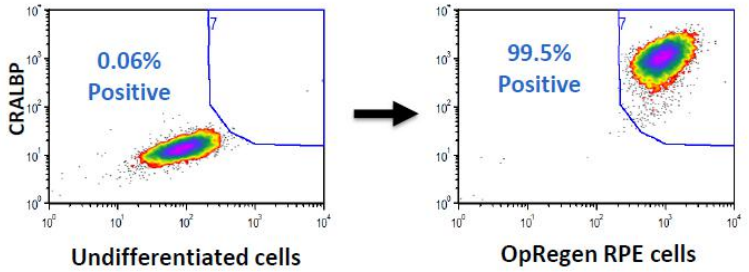
- Cell banking and handling
- Process development
- Manufacture of clinical material
- Scale-up in multi-liter bioreactors
- Multiple clean rooms for parallel GMP production runs

LINEAGE CELL THERAPEUTICS

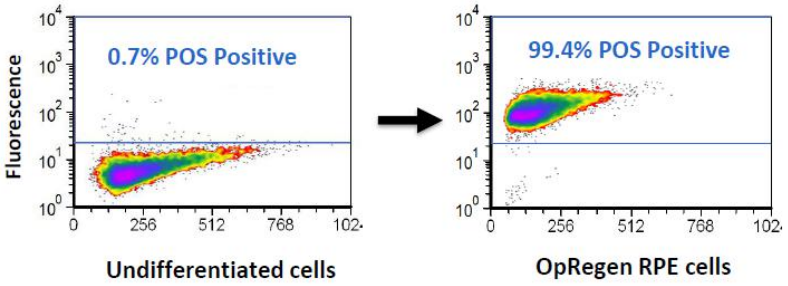
In-House cGMP Manufacturing

The lineage of an established line of pluripotent cells can be controlled to create a population of substantially pure and differentiated cells (e.g. RPE cells)

Identity Assay (purity)



Functional Assay (phagocytosis)

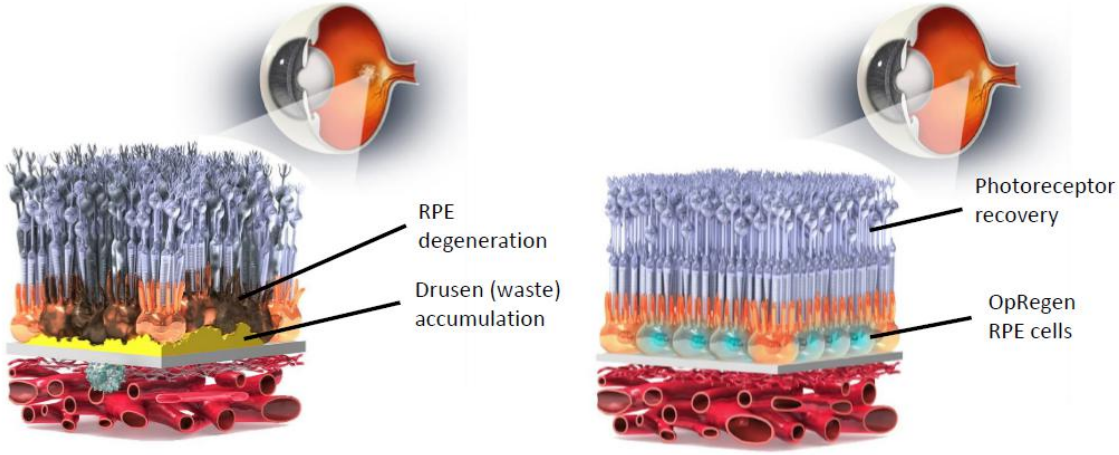


LINEAGE CELL THERAPEUTICS


LINEAGE
CELL THERAPEUTICS
OpRegen®: A Cell Therapy Product Candidate for Dry AMD
AMD is the leading cause of irreversible vision loss in the US
Source: aao.org
www.lineagecell.com
NYSE American: LCTX

Dry Age-Related Macular Degeneration (AMD)

- **Dry AMD involves the loss of specialized retina cells (RPE), causing impaired vision and blindness**
- **OpRegen is formulated as a ready-to-inject suspension of RPE cells delivered to the sub-retinal space**



LINEAGE CELL THERAPEUTICS

Image adapted from scienceofamd.org

OpRegen - Generating Evidence of a Treatment Effect

Stepwise progress has been made to support the expectation of a clinically-meaningful treatment effect from the transplant of RPE cells in a comparative clinical trial.

Key Attribute	Any Evidence?	Setting
Engraftment as a Monolayer	Yes	Multiple Species
Long-Term Survival *in vivo*	Yes	Multiple Species
Treatment Effect	Yes	Rodent Model
Durable Engraftment	Yes	Human
Structural Improvement	Yes	Human
Drusen Reduction	Yes	Human
Slower GA Growth	Yes	Human
Improved BCVA	Yes	Human

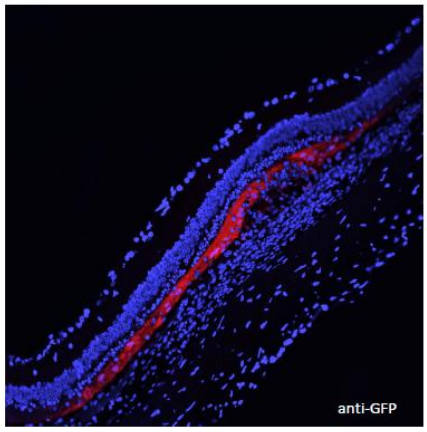
LINEAGE CELL THERAPEUTICS

OpRegen is a cell therapy product candidate currently in a Phase I/IIa clinical study. Determinations of safety or efficacy can only be made by an authorized regulatory body such as the US FDA.

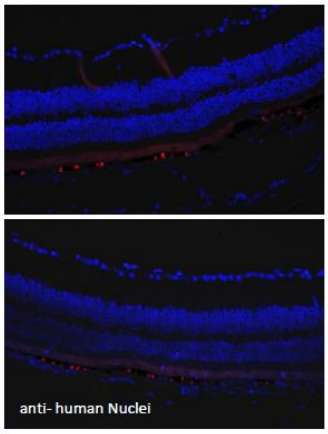
Engraftment and Survival of RPE Cells *in vivo*

- **OpRegen cells counter-stained with DAPI (red line)**
- **OpRegen cells form a stable monolayer in multiple species**

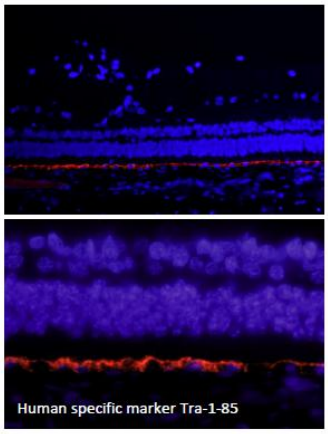
RCS Rat
19 weeks post-transplantation



NOD-SCID Mouse
2 months post-transplantation



Pig
2 months post-transplantation



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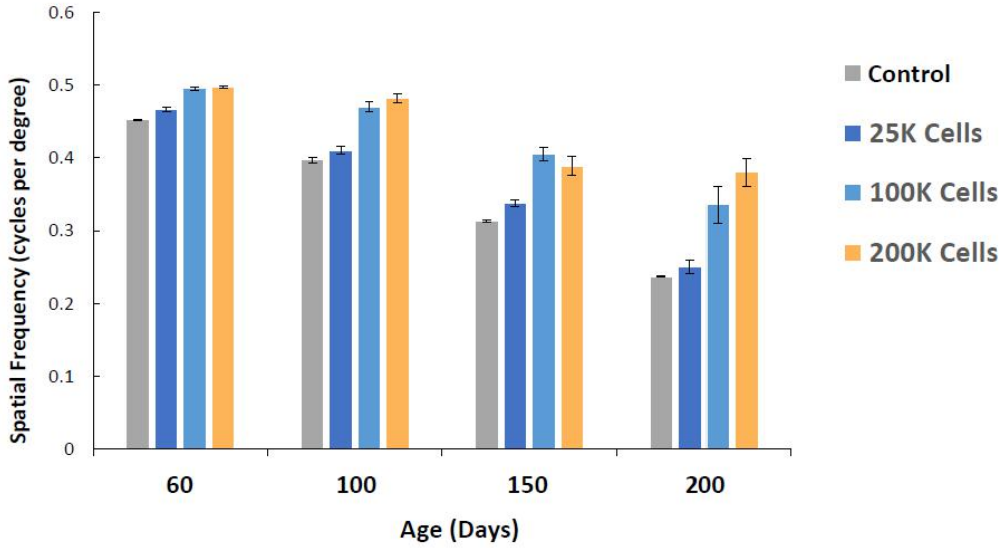
Improved Visual Function in RCS Rat Model

Dose-dependent rescue of vision can be observed via optokinetic nystagmus



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McGill TJ, et al. Transl Vis Sci Technol. 2017; 6:17.

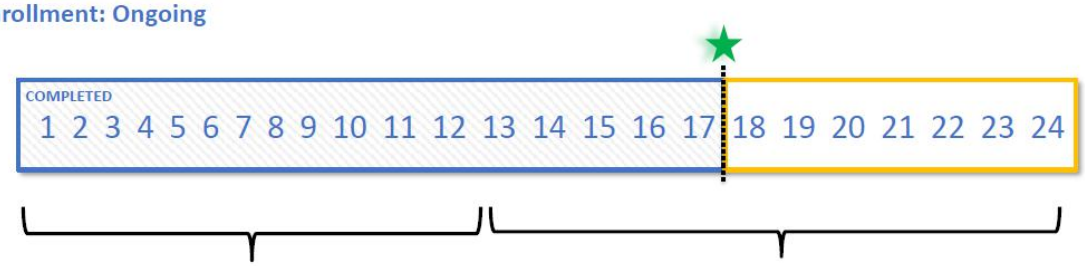
Ongoing Phase I/IIa OpRegen Clinical Trial

Purpose: To evaluate the safety and efficacy of subretinally transplanted RPE cells in patients with advanced dry AMD with geographic atrophy (GA)

Design: Open label, single-arm, and multi-center (5 sites)

Dose and Administration: One 50-100 ul dose of cells injected into the subretinal space

Enrollment: Ongoing



Part I
Safety and Anatomical Changes
Legally Blind (>20/200)

Part II
Safety and Visual Function
Impaired Vision (≤20/64 to ≥20/250)

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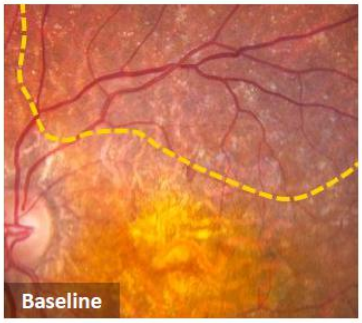
OpRegen Phase I/IIa Clinical Trial
Patient Characteristics

Currently Enrolling Target Patient Population

Parameter	Part 1 - Cohorts 1-3 (legally blind) n=12	Part 2 - Cohort 4 (less advanced disease) n=4
Best Corrected Visual Acuity (BCVA)	≥ 20/200	Between 20/64 and 20/250
Mean Letters on ETDRS	23.7 (± 11.7) [23 letters is ≈20/400]	55 (± 13.5) [55 letters is ≈20/80]
Mean GA Area	12.7 (± 7/6-30) mm^2	7.1 (± 1.4/5.5-8.3) mm^2

OpRegen Phase I/IIa Patient Data: Cell Engraftment



Bleb border (boundary of transplanted OpRegen cells)

Punctate shaded areas are indicative of stable engraftment of pigmented cells for more than 24 months

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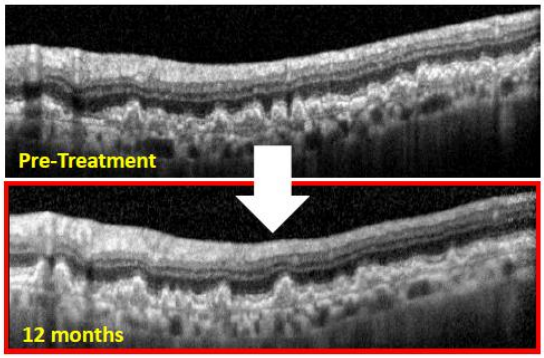
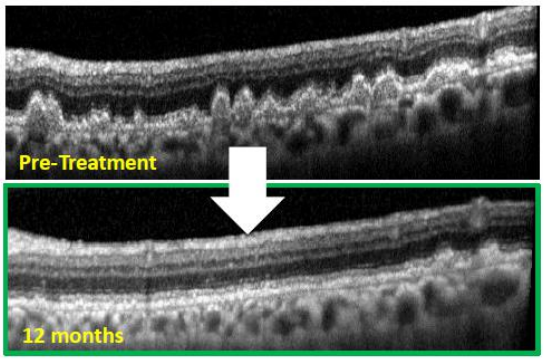
OpRegen Phase I/IIa Patient Data: Drusen Reduction

- Drusen are deposits of waste material associated with higher risk of dry AMD
- Drusen accumulation is observed at pre-treatment (wrinkled white line)
- A reduction or change to drusen is observed through 12 months in some patients

Untreated



Treated

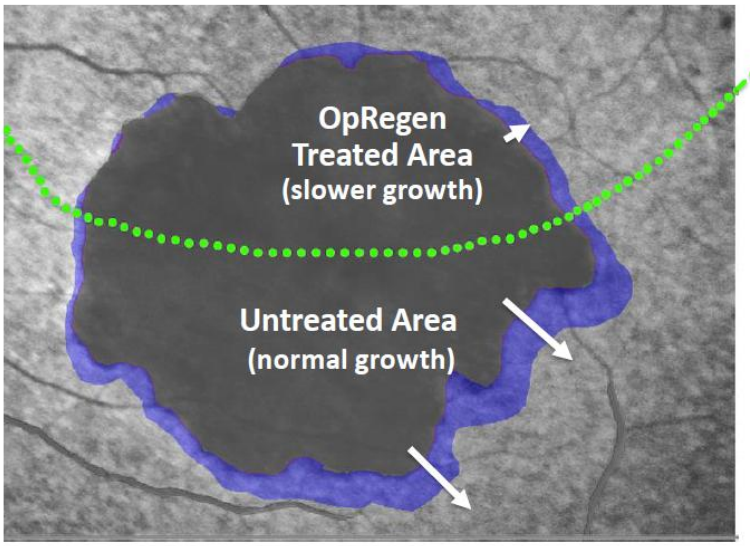


LINEAGE CELL THERAPEUTICS

OpRegen Phase I/IIa Patient Data: Reduced Growth of GA

Before and after tracing of the area of GA shows asymmetric growth

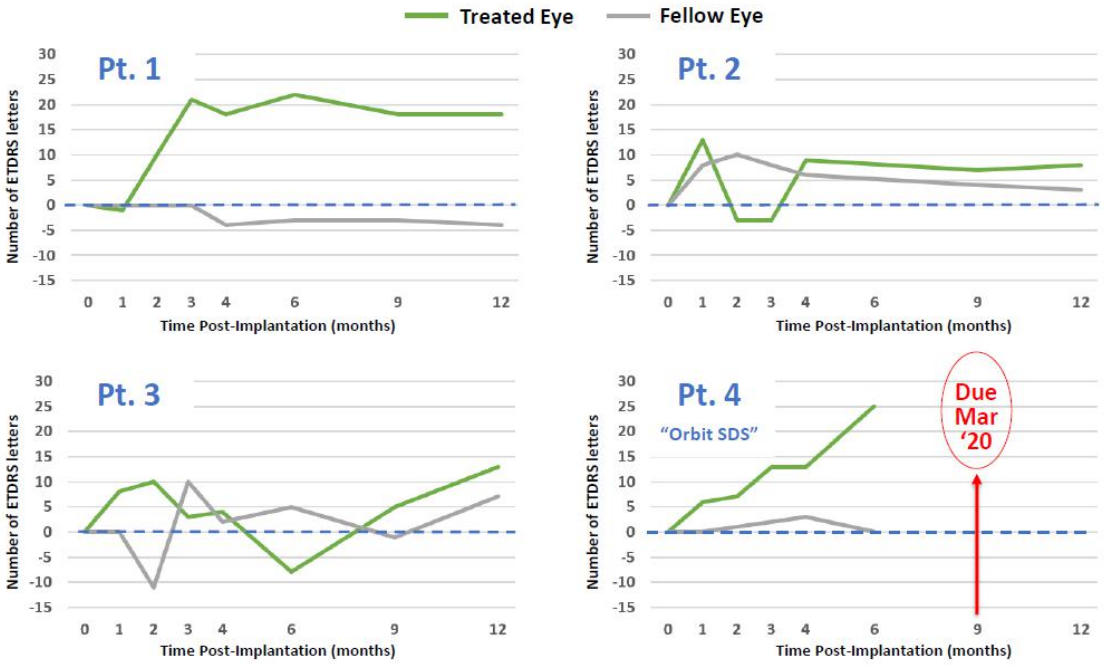
Gray = pre-treatment **Purple = 12 months**



Green line marks the area of transplanted OpRegen cells

- Geographic atrophy (GA) is a slow, degenerative process
- Asymmetrical growth of the GA was observed at 12 months; slower in the OpRegen-treated area

OpRegen Phase I/IIa Patient Data: 12-Month Change in BCVA Cohort 4 (n=5)



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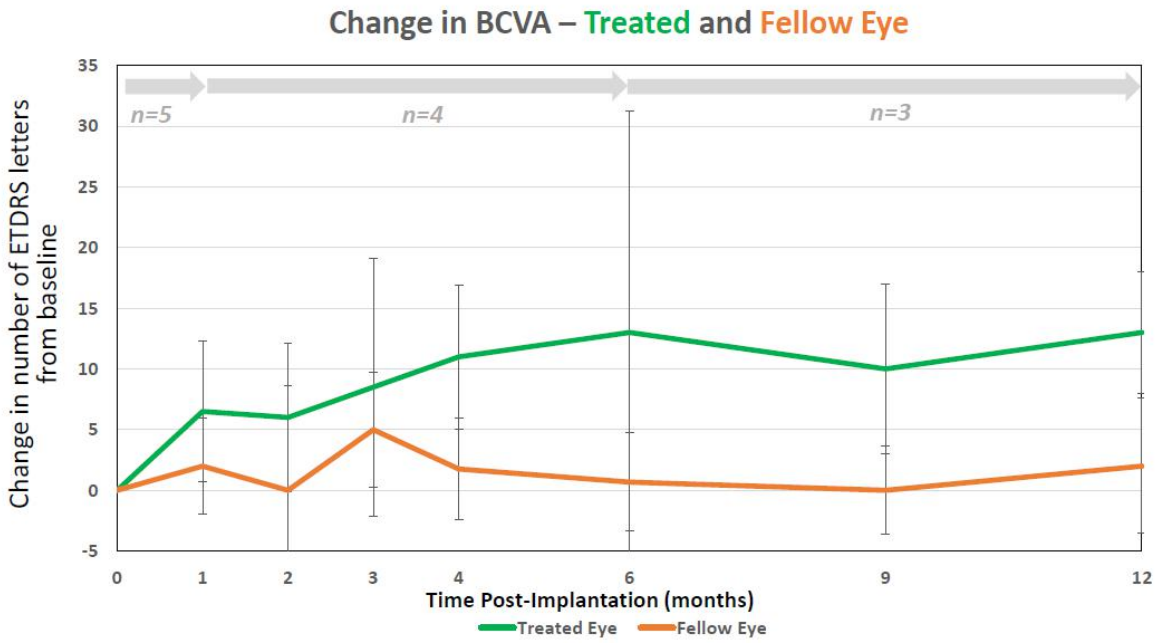
Pt. 5 (also "Orbit SDS") at 1-month is +2 letters

OpRegen Phase I/IIa Patient Data: Mean Change in BCVA (Treated and Fellow Eye)



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Clinical Considerations: Cohort 4 Patients at 12 Months

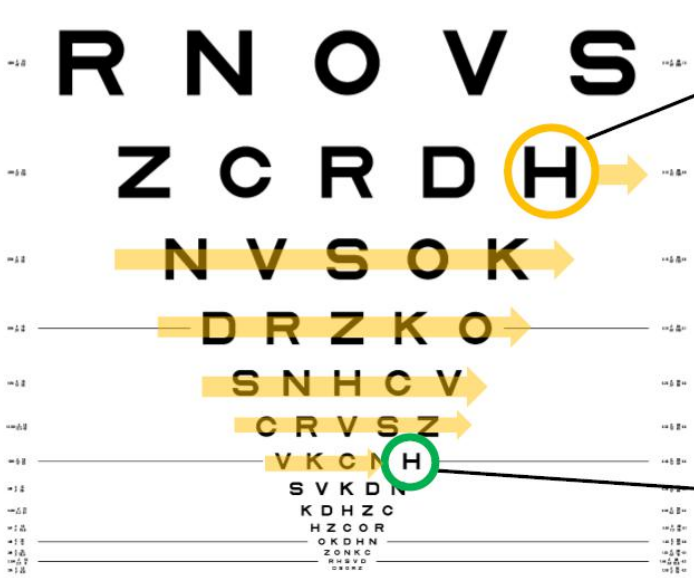
Phase I/IIa Study:
Absolute Changes in Best Corrected Visual Acuity at 12-Month Timepoint*

Subject #	Change to Treated Eye	12-Month Timepoint	Treatment Route
13	+ 18 letters	Month 12	PPV/retinotomy
14	+ 8 letters	Month 12	PPV/retinotomy
15	+ 13 letters	Month 12	PPV/retinotomy
16	+ 25 letters	Month 6	Orbit SDS
17	+ 2 letters	Month 1	Orbit SDS

** Patients are assessed at 15 months and at years 2-5, but 6- and 12- month data are more relevant clinical trial observation periods*

Real-World Relevance of "Letter Improvement"

ETDRS Visual Acuity Chart



Initial Visual Acuity Score
(20/160)

25
Letter Improvement
(20/50)

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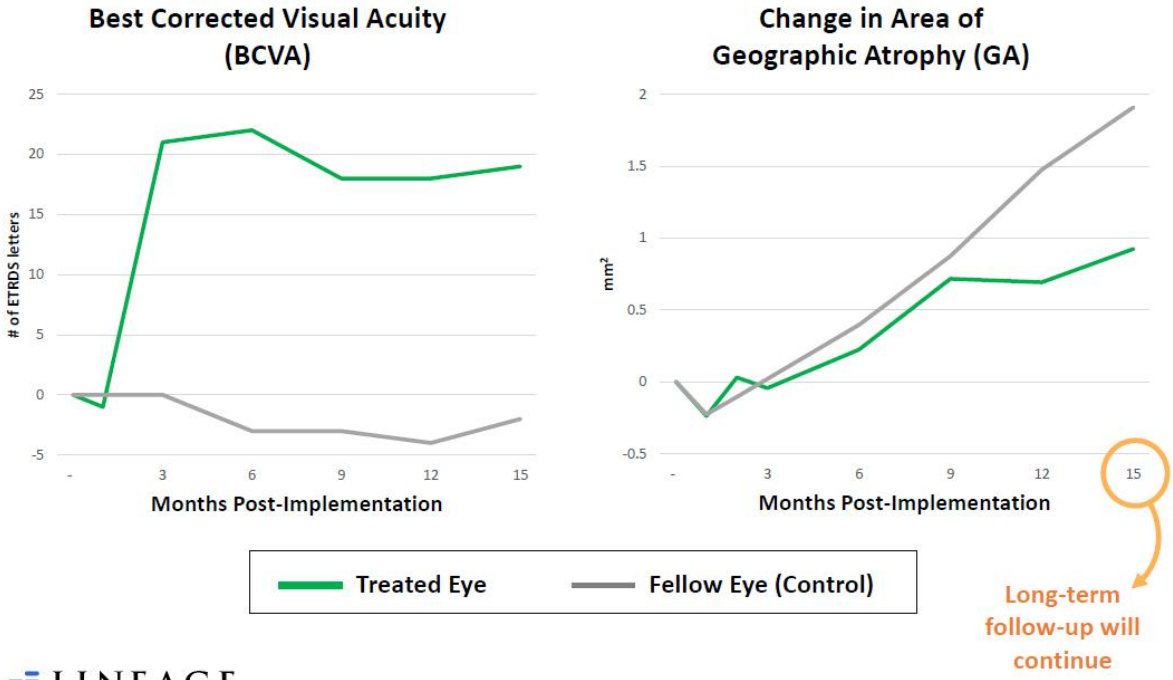
OpRegen Phase I/IIa Patient Data: Correlating BCVA and GA (Subject #13)



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Subretinal Delivery Solution

- **Standard subretinal injection technique requires vitrectomy and retinotomy**
  - **Known complications include retinal detachment and other adverse events**
- **Lineage has begun using a vitrectomy-free subretinal injection device:**
  - **"For subretinal delivery of RPE cells for the treatment of all stages of dry AMD including geographic atrophy"**
- **Device provides access to the subretinal space via a suprachoroidal route**
- **Avoids puncturing the retina and creates a stable bleb of delivered cells**
- **Addresses two major issues; dose control and adverse events due to efflux**

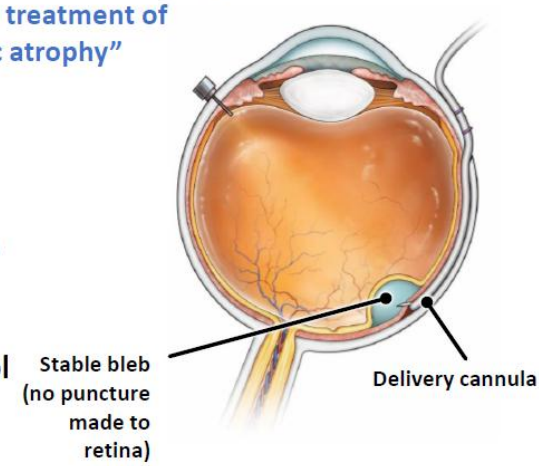

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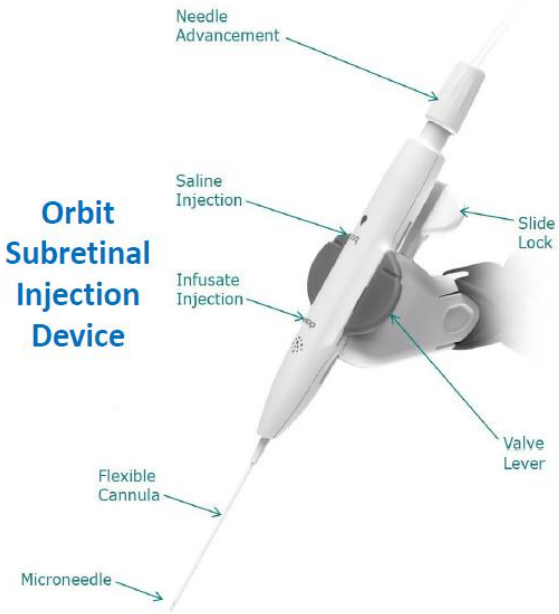
Image used with permission from Gyroscope Therapeutics Ltd.

Orbit SDS (Suprachoroidal Approach)

Orbit Subretinal Injection Device



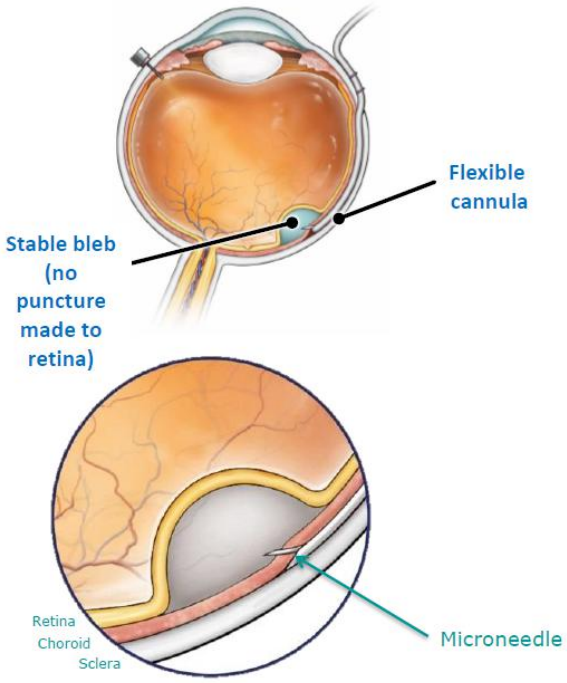


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Image used with permission from Gyroscope Therapeutics Ltd.

Phase I/IIa OpRegen Clinical Study: Orbit SDS Subjects (n=2)

- **First subretinal injection of OpRegen with Orbit performed July 2019**
  - No operational complications
  - No unexpected post-op complications
  - Subject doing well, no unexpected AEs as of 6 months post-op
  - Demonstrated signs of improved visual acuity in treated eye: 25 letter gain
- **Second subretinal injection of OpRegen with Orbit performed Dec 2019**
  - No operational complications
  - No unexpected post-op complications reported to date
  - Subject doing well, no unexpected AEs as of 1 month post-op
  - Demonstrated signs of improved visual acuity in treated eye: 2 letter gain
- **Orbit injections also utilizing Lineage's new "thaw and inject" formulation, which eliminates a full day of prior dose preparation**

Phase I/IIa OpRegen Clinical Trial Highlights

Treatment with OpRegen: Summary Findings

Structural Improvement

Some patients show signs of structural improvement in the retina and decreases in drusen density

- Photoreceptor layer and ellipsoid zone assumed a more regular structural appearance in areas of the transition zone where cells were administered

Encouraging Data

Recent data from patients with earlier-stage disease and better baseline vision is encouraging

- Evidence of durable transplantation and structural improvement within the retina
- Some improvements in visual acuity noted

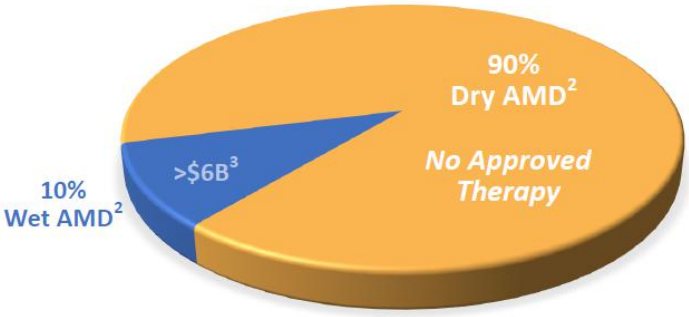
No Unexpected Adverse Events

No unexpected adverse events or treatment-related systemic serious adverse events reported through 17 patients

- Current subjects are being dosed with a new delivery device (Orbit SDS), eliminating the need for a vitrectomy and retinotomy

Significant Unmet Medical Need

- **AMD afflicts ~11 million people in the United States**
  - **~$6B in sales of approved wet AMD therapies: Lucentis® and Eylea®**
  - **But 90% of AMD patients have the dry form**
  - **Currently, there are no approved therapies for dry AMD aside from nutritional supplements[1]**



LINEAGE CELL THERAPEUTICS

Sources: (1) Bright Focus Foundation. Macular Degeneration Facts & Statistics: Bright Focus Foundation. http://www.brightfocus.org/macular/about/understanding/facts.html; (2) JM Seddon, Epidemiology of age-related macular degeneration. (AP Schachat, S Ryan eds.) Retina, 3rd ed. St. Louis, MO: Mosby; 2001;1039-50; (3) 2016 product sales summary based on publicly reported revenue figures for Lucentis and Eylea.

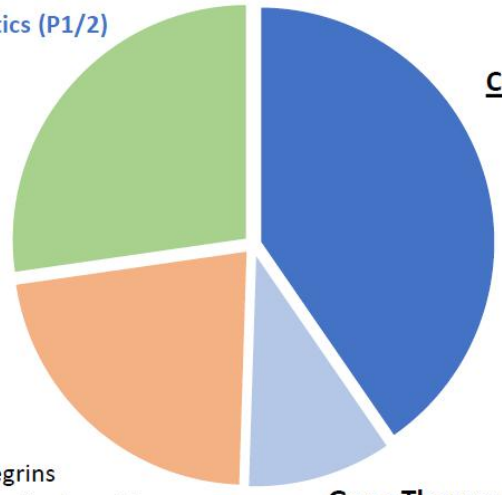
Dry AMD Approaches: In The Clinic

Cell Therapy Has Potential for Disease Reversal and One-Time Treatment

Cell Therapy

Lineage Cell Therapeutics (P1/2)
Astellas (P1/2)
Regenerative Patch Technologies (P1/2)

Cell therapy has the potential for both disease REVERSAL and one-time treatment



Complement
Genentech (P3 fail)
Apellis (P3 ongoing)
Alcon (P2) mAb
Iveric (P2)
NGM (P1) mAb

Oxidative Stress
Allegro (P2) - integrins
Stealth Bio (P2) - mitochondria

Gene Therapy
(also complement)
Gyroscope (P1/2)
Hemera (P1)

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OpRegen Well Positioned in Dry AMD

OpRegen's advantages compared to other cell therapies in development (manufacturing, route of administration)

Company	Stage	Types of Patients	Route of Administration	Status
Lineage Cell Therapeutics (OpRegen)	**Phase 1/2a (n=24)**	**12 @ 20/200+ 12 @ 20/65-20/250**	**Supra-choroidal injection (previously trans-vitreal)**	**17 patients dosed; enrollment ongoing**
Astellas (new cell line)	Phase 1 (n=9) Phase 2 (n=150)	20/200+	Trans-vitreal injection	Phase 1 complete Phase 2 ongoing
Astellas (Ocata* cell line)	Phase 1 (n=18) terminated		Trans-vitreal injection	Study terminated
Regenerative Patch Technologies (CPCB-RPE1)	Phase 1/2a (n=20). 16 actual (study complete)	10 @ 20/200+ 10 @ 20/80+	Surgical placement of parylene membrane via retinotomy	4 subjects published on 04/18; no further info.

**Ocata acquired by Astellas for $379M in 2015*

2020 – OpRegen Upcoming News and Events

- **DSMB meeting to review the Phase I/IIa study protocol**
  - Seeking approval to perform concurrent patient enrollment
- **Opening additional clinical sites in Phase I/IIa study**
  - Cincinnati Eye Institute
  - Wills Eye Hospital
- **Complete patient enrollment in Orbit portion in Q1 2020**
- **Release updated data as available**
- **Comprehensive data review at 2020 ARVO Meeting**
- **Explore partnership opportunities for the program**


LINEAGE
CELL THERAPEUTICS
OPC1: A Cell Therapy Product Candidate for Spinal Cord Injury
Lifetime care for an SCI patient can cost nearly $5 million
Source: christopherreeve.org
www.lineagecell.com
NYSE American: LCTX

Lucas' Story

Lucas Linder, an OPC1 clinical trial participant, was paralyzed from the neck down.
The next year, he threw out the first pitch at a Major League Baseball game.

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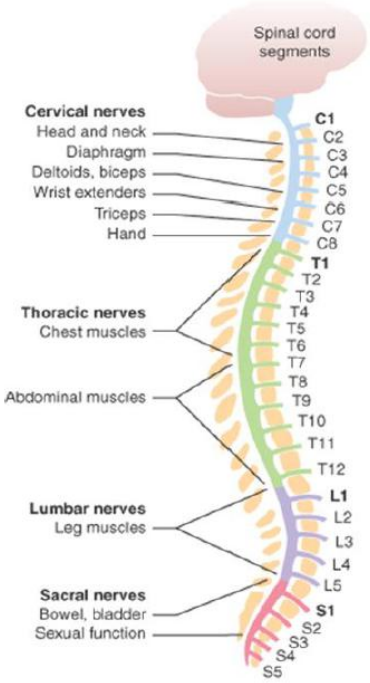
Spinal Cord Injury (SCI) Unmet Need

- **SCI creates a significant burden for patients and caregivers***
  - **67% of patients are unemployed 10 years post-injury**
  - **Lifetime healthcare costs can reach $5 million for one patient**
- **Motor level improvements translate into clinically meaningful improvements in self-care and reductions in cost of care**
- **The therapeutic goal is to restore additional arm, hand, and finger function, increasing independence and quality of life**



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(*) National SCI Statistical Center, 2019 SCI Data Sheet.

OPC1 Overview

- OPC1 is a population of “off the shelf” oligodendrocyte progenitor cells (OPCs)
- OPCs are precursors to the cells which provide electrical insulation for nerve axons in the form of a myelin sheath
- OPC1 has RMAT and Orphan Drug Designations from the FDA
- Program has received >$14M from CIRM

OPC1 Injection Procedure

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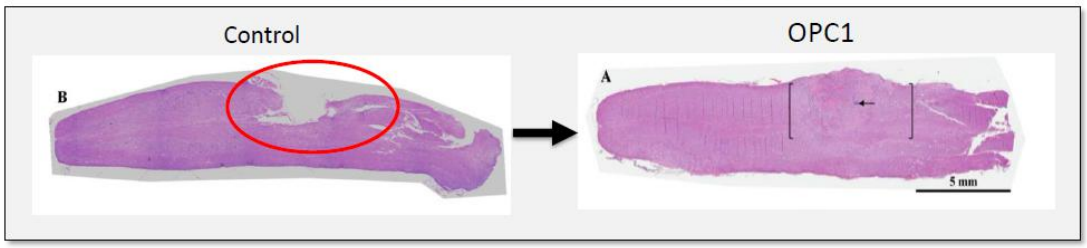
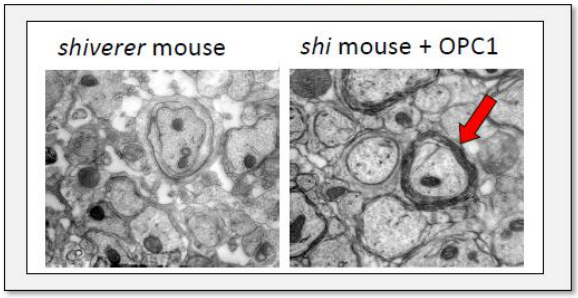
OPC1 Potential Mechanisms of Action

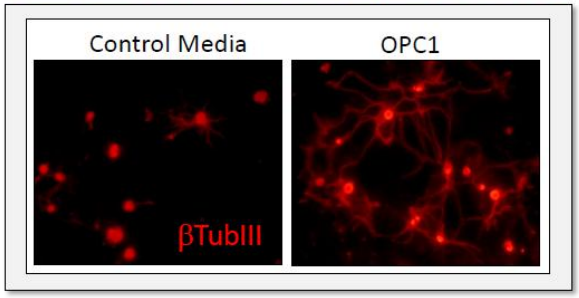
Prevention of Cavitation



Myelination of axons



Secretion of neurotrophic factors



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Completed Studies in Spinal Cord Injury

Pre-Clinical

28 Animal Studies

- Cells survive in the spinal cord
- Improves locomotor activity
- Reduces parenchymal cavitation
- Migrates up to 5cm in spinal cord
- No distribution outside of CNS
- Does not increase mortality
- Does not induce systemic toxicity
- Does not produce teratomas

Clinical (n=30)

Phase 1 Thoracic Study

- Long-term follow up has shown no evidence of adverse changes in any subjects

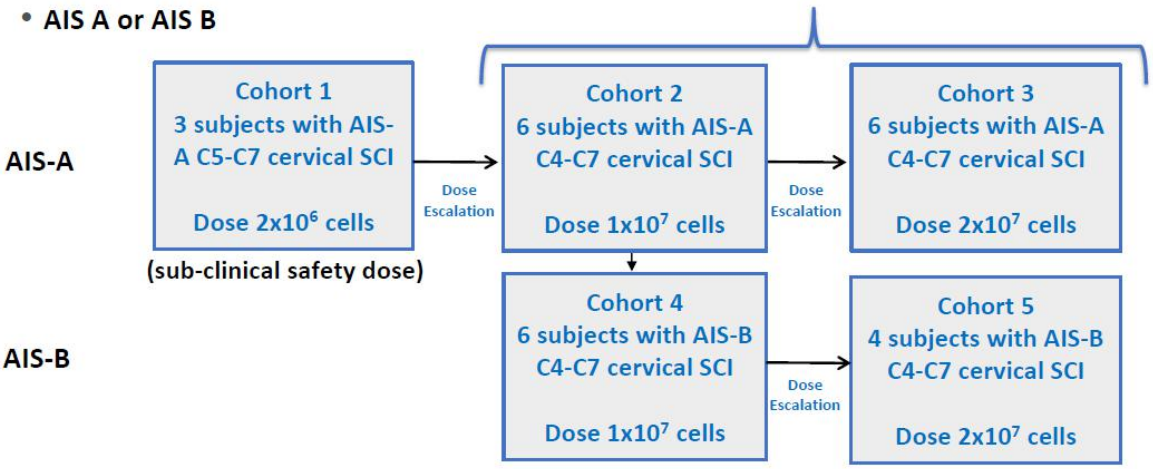
Phase 1/2a Cervical Study

- 25 subjects received up to 20M cells
- Evidence of durable cell engraftment
- Increased motor recovery
- No product-related serious adverse events (SAEs)

SCiStar Study Enrollment & Cohort Progression

- Open Label (n=25)
- Traumatic cervical SCI (C4-C7)
- Dosed 21-42 days post injury
- Ages 18-69
- AIS A or AIS B

- Primary Assessment: Safety
- Secondary Assessment: Neurological Function (ISNCSCI exams)
- Exploratory Assessments: SCIM, GRASSP



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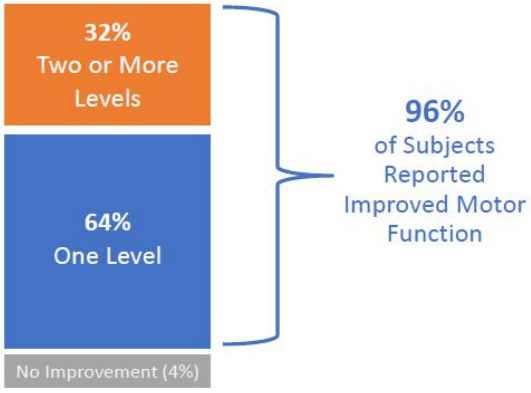
Safety and Efficacy from OPC1 Phase 1/2a Study

Cell Engraftment

(cohorts 2-5 at 12 months, n=22)

Motor Function Gain

(cohorts 2-5 at 12 months, n=22)



To date, there have been no serious adverse events related to the OPC1 cells

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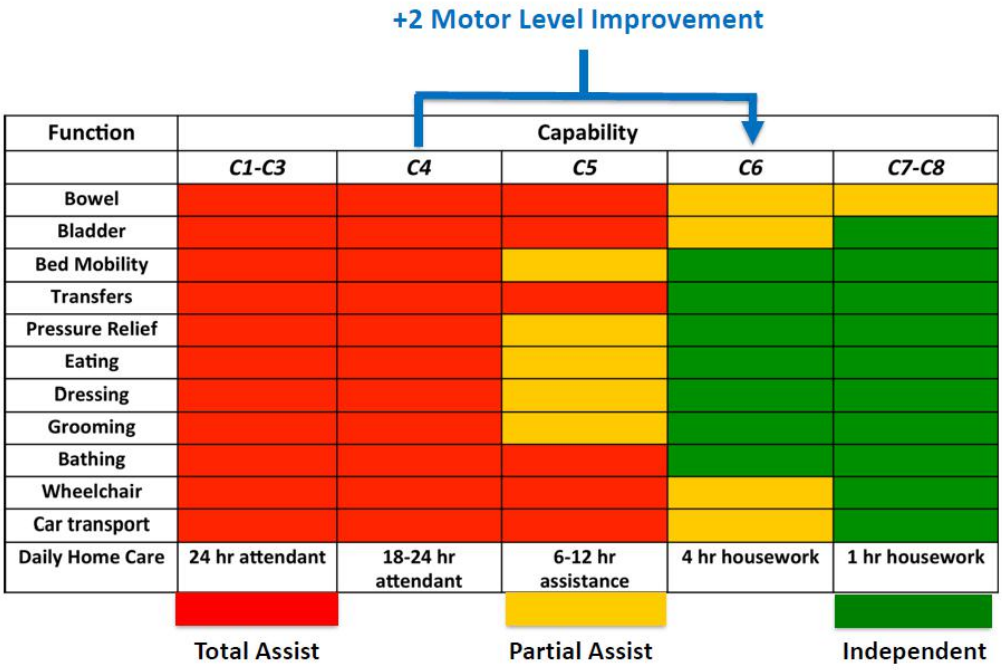
Real-World Impact from +2 Motor Level Gain Activities of Daily Living (ADLs)



Function	Capability				
	C1-C3	*C4*	*C5*	*C6*	*C7-C8*
Bowel					
Bladder					
Bed Mobility					
Transfers					
Pressure Relief					
Eating					
Dressing					
Grooming					
Bathing					
Wheelchair					
Car transport					
Daily Home Care	24 hr attendant	18-24 hr attendant	6-12 hr assistance	4 hr housework	1 hr housework

Total Assist **Partial Assist** **Independent**

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ADLs across different levels of motor function after cervical complete SCI
Modified from Whiteneck et al. 1999)

SCiStar Study – 2 Year Results
(Nov 2019 Update)

- **Overall safety profile continues to be excellent (21 subjects)**
  - MRI scans show no evidence of adverse changes
  - No unexpected serious adverse events related to the OPC1 cells
  - No study subjects had worsening of neurological function

- **Motor Level Improvements**
  - Cohort 1 subjects continue to be stable 2-4 years out post treatment
  - 5 Cohort 2 subjects achieved at least 2 motor levels of improvement over baseline on at least one side (formerly 4 of 6)
  - 1 Cohort 2 subject achieved 3 motor levels of improvement on one side; maintained through 36 month visit

- **Upper Extremity Motor Score (UEMS)**
  - Additional improvement in average UEMS score for Cohort 2

SCiStar Study - Overall Summary

- Excellent overall safety profile
- 96% durable engraftment through 1 year post-injection
- MRI scans available through 24 months show no evidence of adverse changes (21 subjects)
- No subjects had a decline in motor function from Year 1 to Year 2
- 95% of patients exhibited robust motor recovery in the upper extremities at 1 year (at least 1 motor level on at least 1 side)
- Significant motor improvements achieved in five of six Cohort 2 subjects
- Results support further evaluation in a randomized, controlled study

2020 – OPC1 Upcoming News and Events

- **Enhance the OPC1 program commercial readiness**
  - **Introduce enhancements to the manufacturing process (robust and commercially viable improvements to scale, purity, and reproducibility)**
  - **Develop a Thaw-and-Inject formulation (eliminates need for dose preparation and allows for greater number of eligible sites in future studies)**
- **Meet with the FDA to discuss the manufacturing and clinical development of OPC1**
- **Provide updates from the SCiStar Study for SCI**
- **Determine the design for the next OPC1 clinical study**
- **Continue partnership discussions with CIRM**
- **Explore general partnership opportunities for the program, US and ex-US**


LINEAGE
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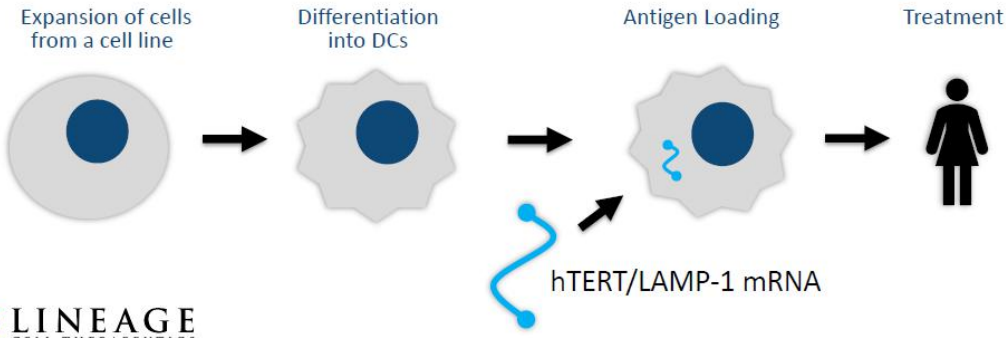
VAC2: A Cell Therapy Product Candidate for Cancer (Immuno-Oncology)
Immunotherapy is "poised to revolutionize treatment for all types of cancer"
Source: cancerresearch.org
www.lineagecell.com
NYSE American: LCTX

VAC Immuno-Oncology (I-O) Program

- **The VAC platform uses mature dendritic cells (DC) to increase a patient's tumor response**
- **VAC is an allogeneic ("off the shelf") vaccine; cells are manufactured from a pluripotent cell line and not derived from the patient (time and cost advantages)**
- **Mature dendritic cells are manufactured and loaded with an antigen present in >85% of all cancers, to stimulate CD8+ (cytotoxic) and CD4+ (helper) T cell responses**
- **"Targeted education" of T cells increases immune response and tumor cell destruction**



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VAC2 Clinical Program

- **Based on encouraging survival data generated in an antecedent autologous VAC1 program in Acute Myeloid Leukemia***
- **VAC2 is partnered with Cancer Research UK, which is responsible for the costs and conduct of manufacturing and the clinical trial**
- **Primary endpoint: safety and tolerability**
- **Secondary objectives: immunological response and survival**
- **Enrollment is ongoing**
- **Preliminary immunogenicity data expected in Q1 2020**
  - **CRUK controls timing of data and publication approval**
- **Decision whether to acquire majority rights to VAC2 expected in 2020**

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* https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.30696

Potential Advantages of the VAC2 Approach

Attribute	VAC2
Single master cell bank for scalability and consistency	✓
Available 'off-the-shelf', on demand	✓
No known significant off-target effects	✓
Low AE-related cost of treatment	✓
Lower anticipated COGS than CAR-T	✓
Use in combination with chemotherapy	✓
Use in combination with immune checkpoint inhibitors	✓

VAC2 was designed to overcome limitations of first-generation I-O combinations and autologous approaches, while providing cost and safety advantages in combination or competition with CAR-T, CTL4, or Immune Checkpoint Inhibitors (ICIs).


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Renevia®
CE Mark Granted September 2019
www.lineagecell.com
NYSE American: LCTX

Renevia® - Medical Aesthetics Program

- A 3-D scaffold designed to support adipose (fat) tissue transplant and retention
- 50-patient, HIV-Associated Lipoatrophy Pivotal Study:
  - Renevia in combination with fat-derived SVF cells for facial volume augmentation
  - Increase in hemifacial volume measured by 3D image scan at 6 months
  - Comparative trial met primary endpoint ($p<.001$)
- CE Mark (Class III) granted September 2019
  - Intended use in adults for the treatment of facial lipoatrophy (delivery of autologous adipose tissue preparations to restore and/or augment facial volume after subcutaneous fat volume loss)
- Lineage has engaged an EU-based BD representative to identify a commercial partner; currently evaluating partnership opportunities
- Renevia could be further developed for other cell/tissue delivery applications for various disease or trauma related to tissue damage

Financial Overview

- **Cash and cash equivalents and marketable securities**
  - **$35.7 million** (as of 9/30/2019, last reported quarter)
  - Sold **$5.0 million** of OncoCyte (OCX) holdings on 1/2/2020
    - Provides funding into 2021 assuming on-time payment of Juvenescence note
- **Value of Remaining Equity Holdings in OCX**
  - **$17.0 million** (based on closing stock price on 1/7/2020)
- **Convertible promissory note due from Juvenescence**
  - **$21.6 million face, plus $3.0 million of accrued interest** (at maturity in August 2020)
- **Market Capitalization**
  - **~$130 million (as of 1/2/2020)**
- **Employees**
  - **51 (as of 1/2/2020)**
- **Cost efficient business model implemented in 2019 which produced lower operational budget of $16 million for 2020**

Lineage 2019 Key Accomplishments

A Year of Transformation

OBJECTIVES SET	OBJECTIVES MET
Expand/diversify our cell therapy pipeline	✓ Acquired Asterias Biotherapeutics, Inc., adding two clinical-stage cell therapy assets to our pipeline
Divest/cease non-core activities	✓ Sold portions of our investments in OncoCyte & AgeX
Enhance competitive advantage of OpRegen program	✓ Introduced new "Thaw-and-Inject" formulation & exclusive delivery device for dry AMD
Re-brand the company, invigorate with new executive team	✓ Re-branded as Lineage Cell Therapeutics, added new CFO, General Counsel, VP of BusDev, relocated to Carlsbad, CA
Enhance IP portfolio	✓ Added 4 new patents covering all three clinical programs, as well as patent rights describing the use of iPS cells
Intelligent cost-cutting	✓ Reduced 2020 operational budget from ~$25M to ~$16M
Strengthen strategic partnerships & funding	✓ Awarded multi-million dollars in grants from the Israel Innovation Authority and the NIH
Increase business development activity	✓ Completed 3 licensing agreements, each relating to different parts of Lineage's IP portfolio

Lineage 2020 Key Goals

A Year of Major Inflection Points

GOALS	TIMING	SPECIFIC INITIATIVES
Advance OpRegen program	Q1 2020 Q1 2020 Q2 2020 2H 2020	Open additional clinical sites in Phase I/IIa study Complete patient enrollment in Orbit portion of Phase I/IIa study Present new data from Phase I/IIa study Meet with FDA and evaluate partnership opportunities
Advance OPC1 Program	Throughout 2020	Enhance program's commercial appeal via manufacturing improvements Meet with the FDA to discuss the manufacturing and clinical development of OPC1 Provide updates from the SCiStar Study for SCI Determine the design for next OPC1 clinical study Continue partnership discussions with CIRM and others
VAC2 Program	Q1 2020 2020	Obtain immunogenicity data from Phase I study Decision on acquiring majority rights to the program
Efficient use of resources	Throughout 2020	Focus on efficient use of capital to support optimal clinical development of our cell therapy platform
Expand BD activities	Throughout 2020	Identify partnership opportunities for OpRegen, OPC1, VAC2 and Renevia programs

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Why Invest in Lineage?

Lineage is well-positioned for near-term growth and long-term value

3 clinical-stage programs with billion dollar potential

World class in-house GMP manufacturing

One of the largest patent portfolios in cell therapy

Funded well into 2021* with cost-efficient business model

Leader in the emerging field of regenerative medicine

LINEAGE CELL THERAPEUTICS

** Assumes payment of $24.6M note receivable from Juvenescence due August 30, 2020.*


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The future of cell therapy.
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