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Stephanie and Tristan

LIVING WITH SICKLE CELL DISEASE

Strategic Update

October 2024

Forward Looking Statements

This presentation contains forward-looking statements and information within the meaning of The Private Securities Litigation Reform Act of 1995. The words ‘‘anticipate,’’ ‘‘believe,’’ ‘‘continue,’’ ‘‘could,’’ ‘‘estimate,’’ ‘‘expect,’’ ‘‘intend,’’ ‘‘may,’’ ‘‘plan,’’ ‘‘potential,’’ ‘‘predict,’’ ‘‘project,’’ ‘‘target,’’ ‘‘should,’’ ‘‘would,’’ and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements in this presentation include statements regarding the Company’s intent to partner or out-license reni-cel and any benefits resulting therefrom, the initiation, timing, progress and results of the Company’s preclinical and clinical studies and its research and development programs, the potential of, and expectations for, the Company’s product candidates, including any *in vivo* gene edited medicines the Company may develop, and the Company’s expectations regarding cash runway. The Company may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: uncertainties inherent in the initiation and completion of preclinical studies and clinical trials, and clinical development of the Company’s product candidates; whether interim results from preclinical studies will be predictive of the final results of the study or the results of any future clinical trials; and availability of funding sufficient for the Company’s foreseeable and unforeseeable operating expenses and capital expenditure requirements. These and other risks are described in greater detail under the caption “Risk Factors” included in the Company’s most recent Annual Report on Form 10-K, which is on file with the Securities and Exchange Commission, as updated by the Company’s subsequent filings with the Securities and Exchange Commission, and in other filings that the Company may make with the Securities and Exchange Commission in the future. Any forward-looking statements contained in this presentation represent Company’s views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Except as required by law, the Company explicitly disclaims any obligation to update any forward-looking statements.

Agenda and Speakers

- Welcome and Strategic Focus Update
- *In vivo* vision, strategy, and preclinical data
- Business Development and Financing
- Closing Remarks
- Q&A

SPEAKERS

Gilmore O'Neill, MB, MMSc
President and Chief Executive Officer

Linda Burkly, P.h.D
Chief Scientific Officer

Erick Lucera, MBA, MS
Chief Financial Officer

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2024 Strategic Objectives

Drive reni-cel (EDIT-301) toward BLA and Commercialization

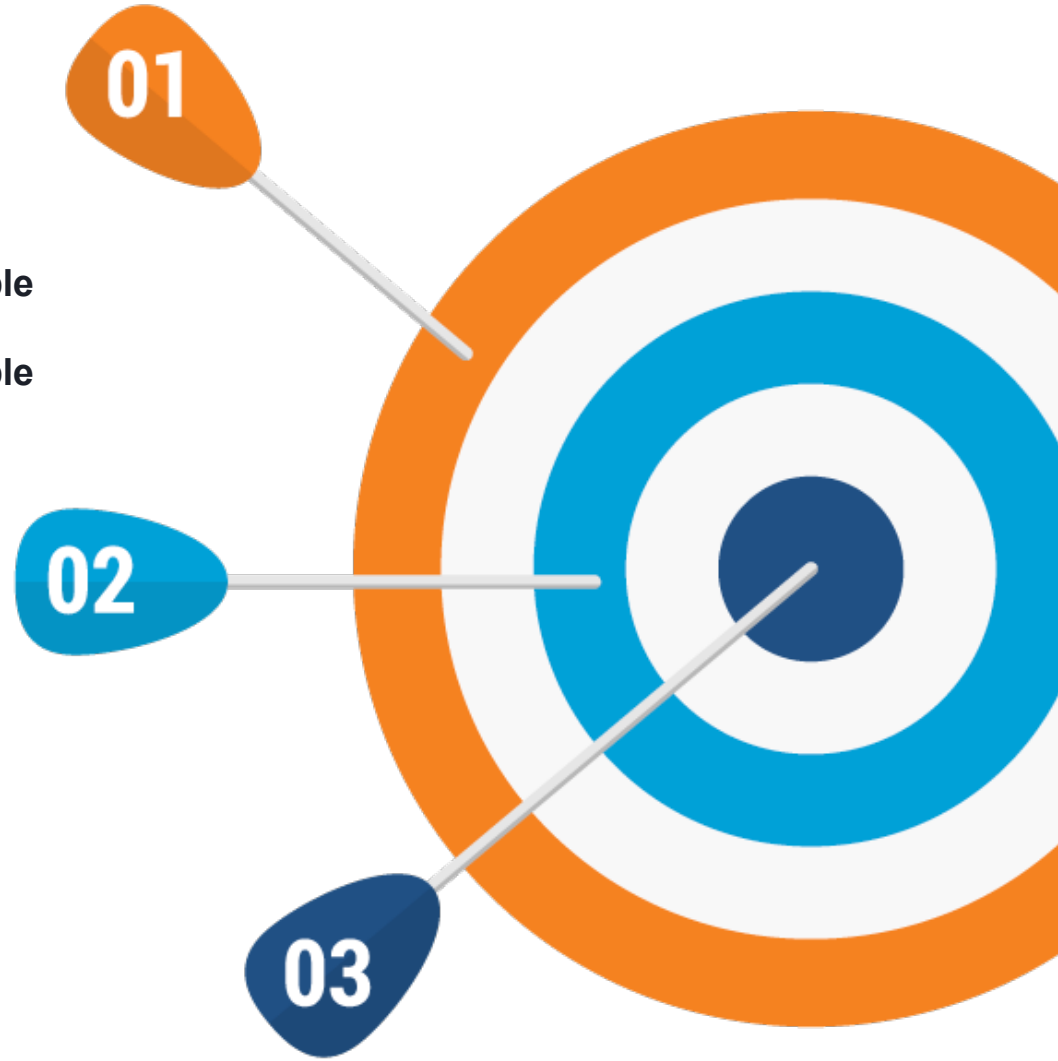
- ✓ **Continue enrollment and dosing** in the RUBY and EdiTHAL trials of reni-cel
- ✓ **Initiate the adolescent cohort** in the RUBY trial
- ✓ **Present a substantive clinical data set of Sickle cell patients** with **considerable clinical follow-up** in the RUBY study in mid-2024
- • **Present a substantive clinical data set of Sickle cell patients** with **considerable clinical follow-up** in the RUBY study by year-end 2024

Strengthen and Focus Discovery to Build *in vivo* Editing Pipeline

- ✓ **Establish *in vivo* preclinical proof-of-concept for an undisclosed indication**
  - ✓ Focus on disease targets with high probability of technical, clinical, regulatory, and commercial success
  - ✓ Initial focus on hematopoietic stem cells (HSCs)

Increase Business Development Activities and Monetize IP

- ✓ **Derive revenue from the Company's foundational IP**, building on the previously announced license agreements with Vertex Pharmaceuticals and Vor Bio



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Leverage Cutting Edge Technology to Become a Leader in *In Vivo* Programmable Gene Editing

Differentiate from Standard of Care

Broadens target profile to treat a larger, global patient population than *ex vivo* medicines with potentially **best-in-class, first-in-class** medicines

Simplify Treatment Experience

Reduces treatment burden for patients and healthcare system removing need for conditioning with chemotherapy, infertility concerns, and isolation during treatment

Editas' clinical validation with reni-cel provides a strong foundation for developing a first and best-in-class *in vivo* medicine

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Editas' *In Vivo* Gene Editing Mission

OUR *IN VIVO* STRATEGY:

Deliver first-to-market and best-in-class in vivo gene edited medicines as cures for genetically determined diseases

Functional Gene Upregulation in Targeted Tissues / Cells

✓ ***Deliver*** **Differentiated Scientific Value**

Near term focus
- Sickle cell disease & beta thalassemia, targeting hematopoietic stem cells (HSCs)
- Genetic loss of function or deleterious mutations in other tissues
- "Programmable" targeted lipid nanoparticle (tLNP) delivery

Develop First-in-Class and Best-in-Class Medicines

✓ ***Focus*** **on High Value Therapeutic Areas**

Select targets that
- Meaningfully differentiate from the standard of care and
- Address unmet need in untapped genetic diseases via upregulation strategy

Leverage Established Gene Editing Capabilities

✓ ***Generate*** **Near-term Catalysts with Capital Efficient Structure**

Uniquely positioned to lead in vivo market by leveraging
- Guide RNA, AsCas12a editing enzyme, messenger RNA, and delivery technology

Differentiated through a Capital Efficient Drive to Meaningful Data, Aiming for First- and Best-in-Class Medicines, and Broad Tissue Access

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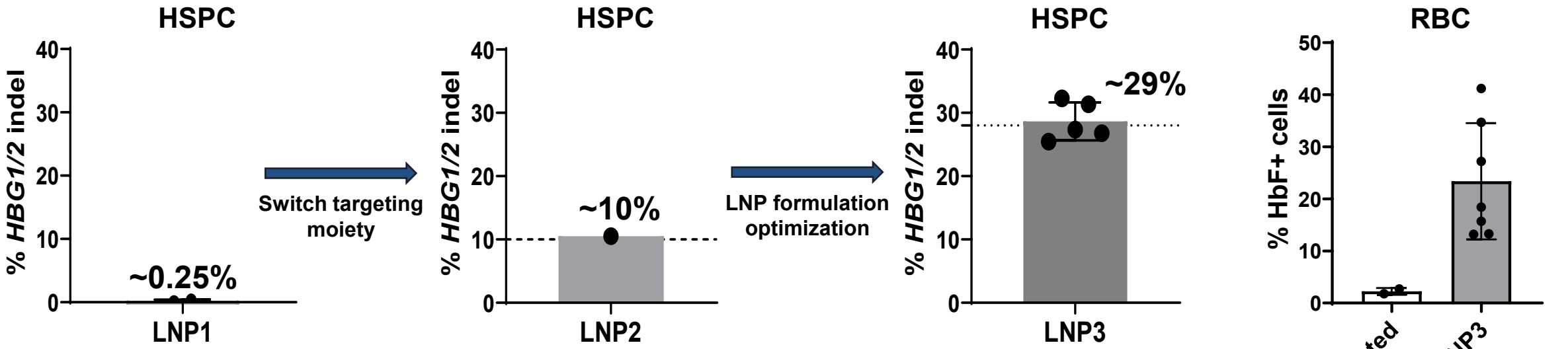
High Levels of *In Vivo* HSPC Editing and HbF Induction Achieved with a Novel LNP and Targeting Strategy in Mice with Human Hematopoietic Stem Cells

In Vivo Editing with targeted LNP (tLNP)

In Vivo Editing and HbF Induction with tLNP



Data from HSPC, each data point a pool from 3 mice, 7 days post dosing

Data from pool of HSPC from 3 mice 4 days post dosing

Data from HSPC of 5 individual mice 6 days post dosing

Data from human red blood cells in bone marrow of individual mice 27 days post dosing

Preclinical PoC achieved as shown by the functional outcome of HbF induction after a single dose of tLNP, editing the clinically validated *HBG1/2* target by AsCas12a enzyme with novel HSC targeting strategy and proprietary LNP

In vivo model: NBSGW mouse strain (NOD.Cg-*Prkdc*^{scid}*Il2rg*^{tm1Wjl}/SzJ (NSG) crossed with C57BL/6J-*Kit*$^{W-41J}$/J (C57BL/6.*Kit*^{W41})) engrafted, without irradiation, with human CD34+ cells from peripheral blood after plerixafor mobilization of cells from bone marrow.

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HSPC: Hematopoietic stem and progenitor cells; HSPC defined as Lin$^-$CD34$^+$CD38$^-$ cells; % indel indicates level of allelic editing; RBC: Red Blood Cell

Preclinical POC Data in *In Vivo* HSC Editing Leverages Editas' Gene Editing Expertise and Provides Foundation for LNP Platform

Potential for Best-in Class, First-in-Class In Vivo Medicine for Sickle Cell Disease

Leveraging reni-cel experience with **validated target and enzyme** that provides for development of a **differentiated medicine for sickle cell disease and beta thalassemia**

Demonstrated *in vivo* capabilities with **devised novel HSC targeting strategy** and **proprietary LNP** to deliver editing cargo

Produced competitive preclinical data set that outperforms data currently in the public domain

Proprietary LNP Platform

- Foundation for a potential **LNP Platform for Delivery to Extrahepatic Tissues**
- Ability to **deliver gene editing cargo** with HSC targeting moiety conjugated to our propriety LNP Platform
- Potential to **deliver cargo to other tissues and cell types of interest**

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Building for a Capital Efficient Gene Editing Company

Seeking Alternatives to Fully Owned Reni-cel Launch

Partner and Out-license Reni-cel Globally
- *More effectively drives to commercialization*
- *Maintains long-term viability of Editas*

Financing a Capital Efficient *in vivo* Editing Pipeline

Capture Curative Opportunity
- *Broaden patient access*
- *Efficient development and commercialization cost model*

Continuing Focus on Business Development and IP Monetization

Leverage Foundational IP Estate
- *Business development to drive IP licensing*
- *Continue to seek anti-dilutive financing opportunities*

Recent Success from IP Financing…

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Editas Medicine Announces $50+ Million Monetization Financing with DRI Healthcare Trust

Strengthens balance sheet with non-dilutive capital to enable further pipeline development and related strategic priorities

October 03, 2024 18:00 ET| Source: Editas Medicine, Inc. Follow

- ***Provides upfront cash of $57M via non-dilutive financing***
- ***Demonstrates strength of Editas' Foundational IP Estate***
- ***Potential to unlock future business development and licensing opportunities***

…Demonstrates Continued Execution to Leverage Foundational IP Estate to Access Non-Dilutive Capital

Closing Remarks

Gilmore O’Neill, MB, MMSc
President and Chief Executive Officer
Editas Medicine

Acknowledgements

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Questions & Discussion

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