Lineage Enters Into Option and License Agreement With Eterna Therapeutics to Develop Hypoimmune Pluripotent Cell Lines for Multiple Neurology Indications

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CARLSBAD, Calif.--(BUSINESS WIRE)--Feb. 22, 2023-- Lineage Cell Therapeutics, Inc. (NYSE American and TASE: LCTX), a clinical-stage biotechnology company developing allogeneic cell therapies to replace and restore specific cell types of the human body, today announced that it has entered into an exclusive option and license agreement (the "Agreement") with Eterna Therapeutics Inc. ("Eterna") for the development of novel beta 2 microglobulin (B2M)-deficient induced pluripotent stem cell (iPSC) lines, which Lineage will evaluate for development into differentiated cell transplant therapies. The new cell lines to be developed by Eterna will support the potential creation of additional product candidates at Lineage, specifically for the treatment of certain central nervous system (CNS) disorders and other neurology indications. Eterna is the exclusive licensee of the key intellectual property underlying this collaboration from its discovery partner Factor Bioscience.

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"This agreement provides the opportunity to combine insights obtained from our dry age-related macular degeneration program with new tools, to broaden the scope of our technology and may help deliver solutions for a wider range of diseases. The engineering of desirable properties into cell lines can also lead to treatments that are highly differentiated from our competitors," stated Brian M. Culley, Lineage's CEO. "The initial cell lines we envision bringing into the clinic through this agreement will utilize proprietary mRNA-based gene-editing technology developed by Eterna's CEO, Dr. Matt Angel. It is natural that we would look to introduce aspects of gene editing, hypoimmunity, and additional pluripotent cell lines alongside our existing directed differentiation capabilities in the furtherance of our overall goal of becoming a comprehensive leader in cell therapy."

Under the Agreement, Eterna plans to conduct certain gene-editing activities and provide materials to Lineage for evaluation. The Agreement provides Lineage an option to obtain an exclusive license to utilize and sublicense the novel gene-edited cell lines for preclinical, clinical, and commercial purposes in the field of CNS diseases. A feature of the starting cell line is the targeted deletion of the B2M gene, which is designed to reduce the immunogenicity of product candidates derived from the lines by inhibiting rejection by CD8+ T cells. Lineage expects this attribute will expand the edited cell lines' overall utility, including for non-immune privileged or non-human leukocyte antigen (HLA) matched indications. Additional planned gene edits may further differentiate the cell line from others currently in use by competitors. Financial terms were not disclosed.

"The cell therapy expertise demonstrated by Lineage makes them an attractive partner to deploy our mRNA cell engineering platform for the generation of novel gene-edited iPSC lines for neurological applications," said Matt Angel, Ph.D., CEO of Eterna. "At Eterna, we have expertise in creating gene-edited iPSC lines using our extensively patented mRNA cell engineering technologies. We look forward to collaborating with the Lineage team on this project and working with them to develop these powerful tools for the generation of new, intelligently-engineered cell therapy product candidates in the CNS space."

About Lineage Cell Therapeutics, Inc.
Lineage Cell Therapeutics is a clinical-stage biotechnology company developing novel cell therapies for unmet medical needs. Lineage's programs are based on its robust proprietary cell-based therapy platform and associated in-house development and manufacturing capabilities. With this platform Lineage develops and manufactures specialized, terminally differentiated human cells from its pluripotent and progenitor cell starting materials. These differentiated cells are developed to either replace or support cells that are dysfunctional or absent due to degenerative disease or traumatic injury or administered as a means of helping the body mount an effective immune response to cancer. Lineage's clinical and preclinical programs are in markets with billion dollar opportunities and include five allogeneic ("off-the-shelf") product candidates: (i) OpRegen ®, a retinal pigment epithelial cell therapy in Phase 2a development for the treatment of geographic atrophy secondary to age-related macular degeneration, is being developed under a worldwide collaboration with Roche and Genentech, a member of the Roche Group; (ii) OPC1, an oligodendrocyte progenitor cell therapy in Phase 1/2a development for the treatment of acute spinal cord injuries; (iii) VAC2, a dendritic cell therapy produced from Lineage's VAC technology platform for immuno-oncology and infectious disease, currently in Phase 1 clinical development for the treatment of non-small cell lung cancer; (iv) ANP1, an auditory neuronal progenitor cell therapy for the potential treatment of auditory neuropathy; and (v) PNC1, a photoreceptor neural cell therapy for the potential treatment of vision loss due to photoreceptor dysfunction or damage. For more information, please visit www.lineagecell.com or follow the company on Twitter @LineageCell.

About Eterna Therapeutics Inc.
Eterna Therapeutics is a preclinical-stage biotechnology company committed to realizing the potential of mRNA cell engineering to provide patients with transformational new medicines. Eterna has in-licensed a portfolio of over 100 patents covering key mRNA cell engineering technologies, including technologies for mRNA cell reprogramming, mRNA gene editing, the NoveSlice™ and UltraSlice™ gene-editing proteins, and the ToRNAdo™ mRNA delivery system from Factor Bioscience. NoveSlice™, UltraSlice™, and ToRNAdo™ are trademarks of Factor Bioscience. F more information, please visit www.eternatx.com.

About Factor Bioscience Inc.
Founded in 2011, Factor Bioscience develops technologies for engineering cells to advance the study and treatment of disease. Factor's gene-editing technologies enable the precise deletion, insertion, and repair of DNA sequences in living cells to correct disease-causing mutations, make cells resistant to infection and degenerative disease, modulate the expression of immunoregulatory proteins to enable the generation of durable allogeneic cell therapies, and engineer immune cells to more effectively fight cancer. Factor's cell-reprogramming technologies enable the generation of clonal lines of pluripotent stem cells that can be expanded and differentiated into any desired cell type for the development of regenerative cell therapies. For more information, visit www.factorbio.com.

Lineage Cell Therapeutics Forward-Looking Statements
Lineage cautions you that all statements, other than statements of historical facts, contained in this press release, are forward-looking statements.

Forward-looking statements, in some cases, can be identified by terms such as “believe,” “aim,” “may,” “will,” “estimate,” “continue,” “anticipate,” “design,” “intend,” “expect,” “could,” “can,” “plan,” “potential,” “predict,” “seek,” “should,” “would,” “contemplate,” “project,” “target,” “tend to,” or the negative version of these words and similar expressions. Such statements include, but are not limited to, statements relating to: our plans to develop new cell lines into differentiated cell transplant therapies and potential product candidates, and the potential indications thereof, including as a result of the Agreement with Eterna; our expectations regarding the utility of edited cell lines, the effect of such cells lines on our overall technology, and any related clinical activities; our ability to differentiate a cell line from those of competitors, to broaden our overall capabilities, to deliver solutions for a wider range of diseases, and to develop treatments that are differentiated from our competitors as a result of the Agreement. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause Lineage’s actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by the forward-looking statements in this press release, including, but not limited to, the following risks: that Lineage or Eterna may fail to fully perform under the Agreement or that Lineage, in its sole discretion, may elect not to exercise its option under the Agreement; that the potential benefits of the Agreement, including the potential development of new cell lines into new product candidates may not be realized; and those risks and uncertainties inherent in Lineage’s business and other risks discussed 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 with the SEC, including Lineage’s most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed with the SEC 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.

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