AgeX Therapeutics Publishes Data in Peer-Reviewed Journal to Advance Potential Cell Therapy AgeX-BAT1 for Type II Diabetes and Obesity

January 9, 2019

- 30M U.S. adults suffer from diabetes and 93M from obesity, with associated medical costs of over $300B annually, necessitating an urgent need for novel treatments
- AgeX-BAT1 for Type II diabetes and obesity aims to return brown adipose tissue, also known as “brown” or “good” fat, back to levels found in young adults
- Loss of brown fat as a result of aging is associated with obesity and Type II diabetes as well as heightened cardiovascular risk
- Published data shows that AgeX’s pioneering PureStem ® cell therapy manufacturing platform generated highly pure, identifiable and scalable brown adipose cells, expressing active adipokines such as adiponectin

ALAMEDA, Calif.--(BUSINESS WIRE)--Jan. 9, 2019-- AgeX Therapeutics, Inc. (NYSE American: AGE) announced today the publication of data relating to its cell therapy product candidate AgeX-BAT1 for Type II diabetes and obesity in the peer-reviewed scientific journal *Stem Cell Research & Therapy*. Scientists now realize that the activity of brown adipose tissue (BAT), also known as “brown” or “good” fat, is markedly lost with age. This loss may contribute to metabolic disturbances seen in Type II diabetes and obesity as well as a heightened cardiovascular risk. AgeX-BAT1 is comprised of regenerative cells capable of becoming BAT and is intended to return BAT levels back to those found in young adults. AgeX is targeting Type II diabetes and obesity as they are areas of high unmet medical need and present multi-billion-dollar market opportunities.

As described in the paper, “Clonal Derivation of White and Brown Adipocyte Progenitor Cell Lines from Human Pluripotent Stem Cells,” two AgeX-BAT1 cell lines, designated NP88 and NP110, were selected for detailed characterization. The data demonstrate AgeX’s PureStem® cell therapy manufacturing platform was successful in generating highly purified cells with precise anatomical identity, and most importantly, capable of potently expressing definitive markers of BAT cells, including active adipokines such as adiponectin. Adiponectin is reported to have beneficial effects in patients with age-related metabolic and cardiovascular diseases. In addition, the paper provides evidence that AgeX’s PureStem ® technology allows for the reliable re-derivation of scalable lots of desired cells.

“In keeping with AgeX’s mandate to use regenerative biology to reverse the degenerative aspects of aging, AgeX-BAT1 will address one of the insidious age-related metabolic imbalances responsible for age-related weight gain as well as other serious age-related conditions such as Type II diabetes and its ensuing cardiovascular risk,” said Michael D. West, Ph.D., Founder and CEO of AgeX, and lead author of the published study. “It is estimated that 30 million U.S. adults have diabetes, the overwhelming majority of the cases being Type II, and that number is rapidly on the rise as a result of the aging demographic. AgeX-BAT1 could potentially provide an important and novel therapeutic strategy for managing the epidemic of metabolic imbalances such as Type II diabetes in aging.”

"Few medical conditions are as prevalent as age-related metabolic imbalances, which carry along with them serious risks, including diabetes, cardiovascular disease, blindness, amputations, and cancer,” said Dr. Annalisa Jenkins, M.B.B.S., F.R.C.P., a member of the AgeX Board of Directors. "Whilst dieting and exercise are beneficial, most people find them difficult to adhere to. To meet this high unmet medical need, we need new approaches, such as AgeX-BAT1.”

Dr. West will discuss the paper as part of his presentation at Biotech Showcase, being held concurrently with the 2019 J.P. Morgan Healthcare Conference in San Francisco. Details of Dr. West’s presentation follow:

Date: Wednesday, January 9
Time: 9:00AM PST
Track: Yosemite-A (Ballroom Level)
Venue: Hilton San Francisco Union Square, 333 O’Farrell Street, San Francisco, Calif.

Authors on the paper are Michael West, Dana Larocca, Jie Li, Jianjie Jiang, Pamela Sim, Ivan Labat, and Hal Sternberg of AgeX; Ching-Fang Chang and Andreas Stahl of the University of California, Berkeley; Karen B. Chapman of Johns Hopkins University; Kari E. Wong of Metabolon, Inc.; James Nicoll and Michael J. Van Kanegan of Zen-BIO, Inc.; Aubrey de Grey of AgeX and the SENS Research Foundation; and Igor Nasonkin of BioTime, Inc.

The paper is available online, and additional information on AgeX-BAT1, including an introductory video, is available on AgeX’s website at www.agexinc.com.

About AgeX-BAT1

The activity of brown adipose tissue (BAT), or “brown fat”, is abundant early in life, but is lost precipitously with age. This tissue is believed to generate heat using blood glucose and circulating fat. The abundance of this tissue in the young is believed to keep metabolism in balance. Its loss with age is understood to lead to weight gain, central obesity, accumulation of fat in the coronary arteries, and Type II diabetes.

The demonstration that the transplantation of BAT from young mice to obese diabetic mice results in improvements in both weight and insulin sensitivity has led to a search for a source of industrially-scalable clinical grade BAT cells to recreate youthful levels of the tissue in old age.

AgeX plans to use HyStem® as a matrix to support the engraftment of AgeX-BAT1 cells. HyStem® is a matrix previously used in clinical trials by

BioTime, Inc. for lipotransfer.

About AgeX Therapeutics

AgeX Therapeutics, Inc. (NYSE American: AGE) is focused on developing and commercializing innovative therapeutics for human aging. Its PureStem® and UniverCyte ™ manufacturing and immunotolerance technologies are designed to work together to generate highly defined, universal, allogeneic, off-the-shelf pluripotent stem cell-derived young cells of any type for application in a whole host of diseases with a high unmet medical need. AgeX has two preclinical cell therapy programs: AGEX-VASC1 (vascular progenitor cells) for tissue ischemia and AGEX-BAT1 (brown fat cells) for Type II diabetes. AgeX's revolutionary longevity platform named induced Tissue Regeneration (iTR™) aims to unlock cellular immortality and regenerative capacity to reverse age-related changes within tissues. AGEX-iTR1547 is an iTR-based formulation in preclinical development. HyStem® is AgeX's delivery technology to stably engraft PureStem cell therapies and slowly release iTR molecules in the body. AgeX is aggressively developing its core product pipeline for use in the clinic to extend human healthspan, and is seeking opportunities to form licensing and partnership agreements around its broad IP estate and proprietary technology platforms for non-core clinical applications.

For more information, please visit www.agexinc.com or connect with the company on Twitter, Facebook and YouTube.

Forward-Looking Statements
Certain statements contained in this release are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements that are not historical fact including, but not limited to statements that contain words such as "will," "believes," "plans," "anticipates," "expects," "estimates" should also be considered forward-looking statements. Forward-looking statements involve risks and uncertainties. Actual results may differ materially from the results anticipated in these forward-looking statements and as such should be evaluated together with the many uncertainties that affect the business of AgeX Therapeutics, Inc. and its subsidiaries, particularly those mentioned in the cautionary statements found in more detail in the "Risk Factors" section of AgeX's Information Statement filed as an exhibit to its Registration Statement on Form 10 with the Securities and Exchange Commissions (copies of which may be obtained at www.sec.gov). Subsequent events and developments may cause these forward-looking statements to change. AgeX specifically disclaims any obligation or intention to update or revise these forward-looking statements as a result of changed events or circumstances that occur after the date of this release, except as required by applicable law.

View source version on businesswire.com: https://www.businesswire.com/news/home/20190109005309/en/

Source: AgeX Therapeutics

for AgeX:
Bill Douglass
Gotham Communications, LLC
bill@gothamcomm.com
(646) 504-0890