Tenaya Therapeutics to Highlight Growing Capabilities in Capsid Engineering, Gene Editing and Manufacturing at the American Society of Gene and Cell Therapy 27th Annual Meeting

May 2, 2024

Abstracts Demonstrate Tenaya's Continued Innovation Across Core Competencies Facilitating Current Pipeline and Enabling Next Wave of Precision Heart Medicines

SOUTH SAN FRANCISCO, Calif., May 02, 2024 (GLOBE NEWSWIRE) -- Tenaya Therapeutics, Inc. (NASDAQ: TNYA), a clinical-stage biotechnology company with a mission to discover, develop and deliver potentially curative therapies that address the underlying causes of heart disease, today announced that it will present seven abstracts focused on the company's growing capabilities for discovering and advancing genetic medicines for heart disease at the upcoming American Society of Gene and Cell Therapy (ASGCT) 27th Annual Meeting, being held May 7-11, 2024, in Baltimore, MD.

Tenaya has established integrated internal capabilities to broadly enable modality agnostic target validation and the design and manufacture of adeno associated virus (AAV)-based genetic medicines focused on the treatment of heart diseases. The company's pipeline includes two clinical-stage gene therapies for cardiomyopathies, as well as earlier-stage research related to gene therapy, gene editing and cardiac cell regeneration, all using adeno-associated virus (AAV) as a delivery vehicle. Tenaya's seven presentations at this year's ASGCT will highlight new capsid engineering insights, the company's emerging gene editing efforts, and manufacturing process optimizations intended to enhance the safety and efficacy profiles of AAV-based gene therapies.

Details of the presentations are as follows:

Capsid Engineering and Promoters
Tenaya has established an active capsid engineering effort encompassing the identification and comparison of known and novel capsids, which are then tested across multiple species to characterize transduction and expression in specific heart cells and/or liver detargeting. At ASGCT, new data from murine and non-human primate studies will be presented comparing previously identified AAV-based capsids, AAV9, AAVrh10 and AAVrh74, for cardiac cell tropism and transgene expression.

In two other posters, Tenaya scientists will present new data describing a novel approach to creating a library of promoters for cardiac-specific gene expression, as well as detailing efforts to design more compact cardiac-specific promoters to accommodate larger gene therapy or gene editing therapeutics.

Wednesday Poster Session, May 8, 2024, at 12 pm ET

- AAV9, AAVrh.10, and AAVrh.74 Exhibit Different Cell Type Tropisms in the Heart Following Systemic Delivery and AAV9 Mediates Superior Cardiomyocyte Transgene Expression in Murine and NHP (abstract #465)
  Lead author: Ze Cheng, Ph.D., Senior Scientist

- Chimeric and Rationally Designed Compact Promoters for Cardiac-Specific Gene Expression (abstract #464)
- AAV DNA shuffle library of GH Loop Variable Regions for Directed Evolution of Cardiotropic Capsids (abstract #482)
  Lead author: Prasad Konkalmatt, Associate Director, AAV Capsid Engineering

Gene Editing
Tenaya scientists will present preclinical results suggesting that gene editing of the R14del variant of the phospholamban (PLN) gene may hold promise as a treatment for PLN-R14del-associated dilated cardiomyopathy. Tenaya has developed a gene editing therapy utilizing a single AAV vector designed to deliver a proprietary self-inactivating CRISPR-Cas9 and PLN- R14del-mutation-specific single guide RNA. Previously, Tenaya shared data from a mouse model showing that the company's gene editing vector corrected the *PLN-R14del* mutation while leaving the wild-type *PLN* gene intact resulting in preserved heart function, reduced fibrosis and extended survival. This year's presentation will replicate that set of data in the same model of disease using self-inactivating vectors designed to decrease the risk of off-target edits without any diminishment of efficacy.

Friday Poster Session, May 10, 2024, at 12 pm ET

- Precision Editing of PLNR14del Mutation Using a Self-Inactivating, All-in-One AAV Vector to Rescue PLN-R14del-Associated Cardiomyopathy (abstract #1701)
  Lead author: Huanyu Zhou, Ph.D., Senior Scientist

Product Development and Manufacturing
Clinical supply of TN-201 and TN-401 gene therapies was manufactured under current Good Manufacturing Practice regulations at Tenaya's Genetic Medicines Manufacturing Center using the company's proprietary Sf9 recombinant baculovirus (Sf9/rBV) production process at the 1000L scale. At ASGCT, Tenaya researchers will present abstracts related to increasing yield and scalability associated with Sf9/rBV manufacturing processes.

Tenaya has also internalized the HEK293 manufacturing platform up to the 200L scale. Tenaya researchers will present data on a novel small molecule additive that increases the productivity of HEK293-based AAV manufacturing processes, which may have implications for improved scalability, productivity and costs.

Friday Poster Session, May 10, 2024, at 12 pm ET

- Development of a Scalable High Yield HEK293 Expression Platform for AAV Manufacturing (abstract #1531)
  Lead author: Charles Feathers, Process Development Manager

- Utilization of Tenaya's AAV Productivity Boosting Small Molecule (SMB) for Intelligent Design of HEK293 Cell Line to Improve AAV Productivity (abstract #1530)
- Development of Highly Productive, Rhabdovirus-free Sf9 Insect Cell Line for Large-scale AAV Production for Cardiovascular Gene Therapies (abstract #1533)
  Lead author: Jackson Leong, Process Development Associate Scientist,

To view full event programming, please visit the ASGCT 27th Annual Meeting website. Following the conference, Tenaya's presentations will be available in the "Our Science" section of the company's website.

About Tenaya Therapeutics
Tenaya Therapeutics is a clinical-stage biotechnology company committed to a bold mission: to discover, develop and deliver potentially curative therapies that address the underlying drivers of heart disease. Leveraging integrated proprietary core capabilities enabling target identification and validation, design of AAV-based genetic medicines and in-house manufacturing the company is advancing a pipeline of novel therapies with diverse treatment modalities for rare genetic cardiovascular disorders and more prevalent heart conditions. Tenaya's most advanced candidates include TN-201, a gene therapy for *MYBPC3*-associated hypertrophic cardiomyopathy (HCM), TN-401, a gene therapy for *PKP2*-associated arrhythmogenic right ventricular cardiomyopathy (ARVC), and TN-301, a small molecule HDAC6 inhibitor being initially developed for heart failure with preserved ejection fraction (HFpEF). Tenaya also has multiple early-stage programs progressing through preclinical development. For more information, visit www.tenayatherapeutics.com.

Forward-Looking Statements
This press release contains forward-looking statements as that term is defined in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements in this press release that are not purely historical are forward-looking statements. Words such as "will," "may," "promise," and similar expressions are intended to identify forward-looking statements. Such forward-looking statements include, among other things, the presentation of data covering Tenaya's capabilities for discovering and advancing genetic medicines; and the therapeutic and commercial potential of Tenaya's capsid engineering, gene editing and manufacturing process optimizations efforts. The forward-looking statements contained herein are based upon Tenaya's current expectations and involve assumptions that may never materialize or may prove to be incorrect. These forward-looking statements are neither promises nor guarantees and are subject to a variety of risks and uncertainties, including but not limited to: availability of data at the referenced times; risks associated with the process of discovering, developing and commercializing therapies that are safe and effective for use as human therapeutics; Tenaya's ability to develop, initiate or complete preclinical studies and clinical trials, and obtain approvals, for any of its product candidates; Tenaya's continuing compliance with applicable legal and regulatory requirements; Tenaya's ability to raise any additional funding it will need to continue to pursue its business and product development plans; Tenaya's reliance on third parties; Tenaya's manufacturing, commercialization and marketing capabilities and strategy; the loss of key scientific or management personnel; competition in the industry in which Tenaya operates; Tenaya's ability to obtain and maintain intellectual property protection for its product candidates; general economic and market conditions; and other risks. Information regarding the foregoing and additional risks may be found in the section entitled "Risk Factors" in documents that Tenaya files from time to time with the Securities and Exchange Commission. These forward-looking statements are made as of the date of this press release, and Tenaya assumes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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