Wave Life Sciences Announces FDA Feedback Supports Registrational Pathway for WVE-006 (RNA Editing) in AATD

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Following meeting with FDA, Wave plans for a single, two-year registrational trial, with a one-year interim analysis for potential accelerated approval based on AATD biomarkers

WVE-006 (RNA editing) has potential to offer the AATD community a new standard-of-care treatment to protect the liver and lung with a safe and convenient therapy

CAMBRIDGE, Mass., Oct. 01, 2026 (GLOBE NEWSWIRE) -- Wave Life Sciences, Inc. (Nasdaq: WVE), a clinical-stage biotechnology company focused on unlocking the broad potential of RNA medicines to transform human health, today announced alignment with the U.S. Food and Drug Administration (FDA) on key aspects of its planned registrational pathway for WVE-006, an investigational GalNAc-RNA editing oligonucleotide for the treatment of alpha-1 antitrypsin deficiency (AATD). Following the company's FDA meeting, planning is underway for a two-year registrational trial to support potential full approval, with a one-year interim analysis to support potential accelerated approval based on AATD biomarkers. Additionally, the FDA supports the use of Wave's current LC-MS assay to measure M-AAT (wild-type) and Z-AAT (mutant) protein for the WVE-006 registrational program.

"A registrational trial design that offers an efficient path to full approval, without the need for a separate confirmatory trial, is advantageous as we work to bring WVE-006 to the ~200,000 individuals living with Pi*ZZ AATD in the U.S. and Europe. Our discussions with key opinion leaders underscore the high unmet need and burden of the current standard of care, IV augmentation therapy, which may leave patients with depleted AAT levels during lung exacerbations, and does not address the risk of liver disease. WVE-006 avoids the irreversible bystander edits, indels and other off-target edits associated with DNA base editing. With the potential to address both lung and liver AATD with infrequent subcutaneous dosing and a favorable safety profile, we believe WVE-006 could meaningfully improve patients' quality of life and offer a comprehensive treatment approach," said Christopher Wright, MD, PhD, Chief Medical Officer at Wave Life Sciences.

WVE-006 is being evaluated in the ongoing Phase 1b/2a RestorAATion-2 open-label clinical trial in individuals with AATD who have the homozygous Pi*ZZ mutation, and Wave is on track to share data from the 600 mg (monthly) multidose cohort in the fourth quarter of 2026. WVE-006 continues to be generally safe and well tolerated with no liver toxicities.

About WVE-006
WVE-006 is a GalNAc-conjugated, subcutaneously delivered, A-to-I RNA editing oligonucleotide (AIMer) that was developed with Wave's best-in-class oligonucleotide chemistry platform. By correcting the single RNA base mutation associated with the Pi*ZZ genotype, WVE-006 is designed to deliver a comprehensive treatment approach for AATD by producing healthy, wild-type M-AAT, decreasing unhealthy, mutant Z-AAT aggregates in liver, and dynamically increasing AAT, a protein responsible for protecting lungs against ongoing damage.

About Alpha-1 Antitrypsin Deficiency (AATD)
AATD can manifest as both lung and liver disease. It is a rare, inherited genetic disorder caused by a G-to-A point mutation in the SERPINA1 gene, referred to as the Z allele. Approximately 200,000 people in the U.S. and Europe are homozygous for the Z allele. In healthy individuals, wild-type, M-AAT protects the lung from proteolytic and inflammatory damage, particularly during exacerbations. In AATD, instead of wild-type, functional M-AAT traveling through the bloodstream to the lungs, mutant Z-AAT protein tends to get trapped in the liver and causes a lack of functional AAT in the lungs. Further, Pi*ZZ individuals have a reduced capacity to produce incremental AAT protein during an acute phase response. Together, these effects can lead to progressive lung disease, including chronic obstructive pulmonary disease (COPD) and early-onset emphysema, as well as liver disease, including fibrosis, cirrhosis, and hepatocellular carcinoma.

About Wave Life Sciences
Wave Life Sciences (Nasdaq: WVE) is a biotechnology company focused on unlocking the broad potential of RNA medicines to transform human health. Wave's PRISM ® platform combines multiple RNA medicine modalities, chemistry innovation, and deep insights in human genetics to deliver scientific breakthroughs that treat both rare and common disorders. Its toolkit of RNA-targeting modalities, including RNAi (SpiNA) and RNA editing (AIMers), provides Wave with unmatched capabilities for designing and sustainably delivering candidates that optimally address disease biology. Wave's pipeline is focused on its obesity (WVE-007), alpha-1 antitrypsin deficiency (WVE-006) and PNPLA3 I148M liver disease (WVE-008) programs, and also includes clinical programs in Duchenne muscular dystrophy and Huntington's disease, as well as several preclinical programs utilizing the company's versatile RNA medicines platform. Driven by the calling to "Reimagine Possible," Wave is leading the charge toward a world in which human potential is no longer hindered by the burden of disease. Wave is headquartered in Cambridge, MA. For more information on Wave's science, pipeline and people, please visit www.wavelifesciences.com and follow Wave on X and LinkedIn.

Forward-Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, our plans for an efficient registrational trial; our understanding of the anticipated therapeutic benefits of WVE-006 as a therapy for AATD and the potential to address both lung and liver manifestations of the disease; WVE-006's advantages in avoiding irreversible bystander edits, indels and other off-target edits associated with DNA base editing; our estimates of the AATD patient population that may benefit from WVE-006; our understanding of the dose levels and dosing frequency for WVE-006; our plans and estimated timing to share additional data from the RestorAATion-2 trial; our understanding of the safety profile of WVE-006. The words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue," "target" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release and actual results may differ materially from those indicated by these forward-looking statements as a result of these risks, uncertainties and important factors, including, without limitation, the risks and uncertainties described in the section entitled "Risk Factors" in Wave's most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC), as amended, and in other filings Wave makes with the SEC from time to time. Wave undertakes no obligation to update the information contained in this press release to reflect subsequently occurring events or circumstances.

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