Esperion Unveils Promising Research Supporting Lead Development Candidates for Primary Sclerosing Cholangitis (PSC) at R&D Day 2025

April 24, 2025

– Expands Development Portfolio with Introduction of a Novel Program Targeting PSC –

– Confirms Highly Specific Allosteric ACLY Inhibitor Shown to Reduce Liver Injury, Inflammation and Fibrosis Across Multiple PSC-Relevant Pre-Clinical Models –

– Demonstrates Internal R&D Capabilities with Wholly Owned, Next-Generation Candidates Targeting Liver and Kidney Disease –

– Esperion to Webcast R&D Day Event Today at 9:00 a.m. ET –

ANN ARBOR, Mich., April 24, 2025 (GLOBE NEWSWIRE) -- Esperion (NASDAQ: ESPR) today announced that the Company plans to highlight new research supporting its lead development candidates for the treatment of primary sclerosing cholangitis (PSC), a rare and progressive liver disease, today at 9:00 a.m. ET in New York City. A live webcast of the event will also be available. These candidates are novel allosteric inhibitors of ATP citrate lyase (ACLY), a key metabolic enzyme with emerging relevance in hepatic inflammation and fibrosis.

“We are leveraging our deep expertise in ACLY biology to expand our portfolio beyond NEXLETOL® (bempedoic acid)/NEXLIZET® (bempedoic acid and ezetimibe) and to address the urgent needs of patients living with PSC,” said Sheldon Koenig, Chief Executive Officer at Esperion. “Our lead candidates, including ESP-1336, are promising, potential first-in-class allosteric ACLY inhibitors, well-characterized with significant preclinical data, and represent a natural extension of our metabolic franchise. PSC is a rare and progressive liver disease with no approved therapies proven to slow or halt its progression. Our next-generation ACLY inhibitor discovery program was purpose-built to improve potency, selectivity, and guide indication and patient population selection through data-driven innovation.”

“ACLY is a promising target in hepatic disease, given its central role in metabolic regulation,” said David E. Cohen MD, PhD, Chief, Division of Gastroenterology, Hepatology and Endoscopy, Brigham and Women’s Hospital. “By modulating acetyl-coenzyme A (acetyl-CoA) levels in multiple hepatobiliary cell types, these inhibitors may disrupt key disease-driving pathways in PSC, offering a potentially transformative approach to treatment.”

R&D Day Guest Speakers

- Christos S. Mantzoros, MD, DSc, PhD, h.c. mult., Professor of Medicine Harvard Medical School
- David E. Cohen, MD, PhD, Chief, Division of Gastroenterology, Hepatology and Endoscopy, Brigham and Women’s Hospital
- Mary Pressley Vyas, Vice President, Strategic Initiatives, PSC Partners

R&D Day Highlights

- Target validation underpins Esperion’s next-generation ACLY inhibition discovery program in liver diseases.
    - Selected PSC as the lead indication for next-generation ACLY inhibition discovery program.
    - Utilized multi-omics, phenome-wide association studies, and preclinical disease modeling to uncover novel ACLY pathways and disease links beyond cardiovascular disease.
    - Identified ACLY mechanisms linked to bile duct injury, inflammation, and fibrosis – key drivers of PSC progression.
- Progressing a differentiated ACLY inhibitor program with strong preclinical data.
    - Discovered lead candidates through high-throughput and structure-based screening, optimized for PSC-specific biology.
    - Observed efficacy in human liver microtissues, and chemically and surgery induced liver injury models.
    - Showed consistent reductions in liver injury, inflammation, and fibrosis across multiple preclinical models.
- PSC represents a large unmet medical need with no approved therapies and significant market potential.
    - Potential eligibility for Orphan Drug and Fast Track designations from the U.S. Food and Drug Administration.
    - Estimated >$1 billion annual market opportunity.
    - Estimated prevalence of approximately 76,000 diagnosed PSC patients across the U.S. and Europe as of 2024.

Webcast Information

A live webcast of the R&D event will be available and those who intend to join virtually can register for the webcast on the

Investor section of the Esperion website. The archived replay will be available approximately two hours after completion of the event and will be archived on the Company's website for approximately 90 days.

A copy of the R&D Day presentation can be found here.

About Primary Sclerosing Cholangitis
Primary Sclerosing Cholangitis (PSC) is a rare, progressive, cholestatic, immune-mediated disease of the bile ducts. Bile ducts carry the digestive liquid bile from the liver to the small intestine. In PSC, inflammation and injury cause scarring, stricturing, and concentric, obliterative fibrosis within the bile ducts. These processes make the bile ducts hard and narrow leading to biliary cirrhosis, portal hypertension, and eventually hepatic failure in a majority of patients.

The pathogenesis of PSC remains unknown and there is no proven medical or interventional therapy to halt the progression of disease. A liver transplant is the only known long-term treatment option for PSC, however up to 30% of patients who receive a liver transplant for PSC experience recurrence.

About Esperion Therapeutics
Esperion Therapeutics, Inc. is a commercial stage biopharmaceutical company focused on bringing new medicines to market that address unmet needs of patients and healthcare professionals. The Company developed and is commercializing the only U.S. Food and Drug Administration (FDA) approved oral, once-daily, non-statin medicines for patients who are at risk for cardiovascular disease and are struggling with elevated low density lipoprotein cholesterol (LDL-C). These medications are supported by the nearly 14,000 patient CLEAR Cardiovascular Outcomes Trial. Esperion continues to build on its success with its next generation program which is focused on developing ATP citrate lyase inhibitors (ACLYi). New insights into the structure and function of ACLYi fully enables rational drug design and the opportunity to develop highly potent and specific inhibitors with allosteric mechanisms.

Esperion continues to evolve into a leading global biopharmaceutical company through commercial execution, international partnerships and collaborations and advancement of its pre-clinical pipeline. For more information, visit esperion.com and follow Esperion on LinkedIn and X.

Forward-Looking Statements
This press release contains forward-looking statements that are made pursuant to the safe harbor provisions of the federal securities laws, including statements regarding marketing strategy and commercialization plans, current and planned operational expenses, future operations, commercial products, clinical development, including the timing, designs and plans for the CLEAR Outcomes study and its results, plans for potential future product candidates, financial condition and outlook, including expected cash runway, and other statements containing the words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “suggest,” “target,” “potential,” “will,” “would,” “could,” “should,” “continue,” and similar expressions. Any express or implied statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause Esperion’s actual results to differ significantly from those projected, including, without limitation, the net sales, profitability, and growth of Esperion’s commercial products, clinical activities and results, supply chain, commercial development and launch plans, the outcomes and anticipated benefits of legal proceedings and settlements, and the risks detailed in Esperion’s filings with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Esperion disclaims any obligation or undertaking to update or revise any forward-looking statements contained in this press release, other than to the extent required by law.

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