Galectin Therapeutics contribution to improve histology interpretation of cirrhotic liver biopsies with Machine Learning published in prominent Gastroenterology Journal

January 24, 2023

Study to improve histology interpretation of cirrhotic liver biopsies highlights limitations of current histology techniques and re-emphasizes the clinical relevance and regulatory potential of esophago-gastric endoscopies when evaluating candidate therapies for liver cirrhosis.

NORCROSS, Ga., Jan. 24, 2023 (GLOBE NEWSWIRE) -- Galectin Therapeutics Inc. (NASDAQ:GALT), the leading developer of therapeutics that target galectin proteins, today announced that the scientific paper, “Machine Learning Liver Histology Scores Correlate With Portal Hypertension Assessments In Nonalcoholic Steatohepatitis Cirrhosis,” was published in *Alimentary Pharmacology and Therapeutics*, a prominent peer-reviewed gastroenterology journal.

This work analyzes liver biopsy material from a phase 2 study sponsored by Galectin Therapeutics and explores how the use of a machine learning histology model could potentially improve the assessment of key outcome changes, such as fibrotic features, beyond what is available with currently available histology methods. The study was done in collaboration with key U.S. academic hepatology centers and with HistoIndex Pte Ltd of Singapore. Dr. Mazen Noureddin, Houston Methodist Hospital and Houston Research Institute, Houston, TX, is the first author and Dr. Naga Chalasani, Division of Gastroenterology and Hepatology, Department of Medicine, Indiana University School of Medicine, Indianapolis, IA, is the senior author.

The study explored liver slides from patients with portal hypertension caused by NASH liver cirrhosis. Data were acquired by a proprietary second harmonic generation/two-photon excitation fluorescence system and submitted to a machine learning-based analysis. This innovative technology allowed researchers to derive more than 400 histologic variables related to liver septa, nodules, and fibrosis morphology, many of which cannot be analyzed by currently available methods. The study also explored the correlation of these parameters with the degree of portal hypertension.

Dr. Pol Boudes, M.D., Chief Medical Officer of Galectin Therapeutics, said: “we want to thank Dr. Noureddin, Dr. Harrison, Dr. Chalasani, and their collaborators for their expertise and their contribution to this work. We also greatly appreciate their continuous support in the ongoing belapectin program through their participation in NAVIGATE.” Dr Boudes added: “‘liver histology interpretation, particularly at the cirrhosis stage, are problematic for a drug developer. We were particularly interested in the HistoIndex technology because it allows the analysis of unstained liver biopsy slides. The staining quality, and multiple stains have to be used with traditional methods, is one of the liabilities of current methodologies. The results of this study are preliminary and must be confirmed in other datasets, but the technology is innovative and may help us better decipher the complex inflammatory and fibrotic processes at play in liver cirrhosis.”

Noureddin Mazen, Goodman Zachary, Tai Dean, Chng Elaine L. K., Ren Yayun, Boudes Pol, Shlevin Harold, Garcia-Tsao Guadalupe, Harrison Stephen A., Chalasani Naga P. Machine Learning Liver Histology Scores Correlate With Portal Hypertension Assessments In Nonalcoholic Steatohepatitis Cirrhosis is accessible online https://doi.org/10.1111/apt.17363

About Belapectin
Belapectin is a complex carbohydrate drug that targets galectin-3, a critical protein in the pathogenesis of NASH and fibrosis. Galectin-3 plays a major role in diseases that involve scarring of organs, including fibrotic disorders of the liver, lung, kidney, heart and vascular system. Belapectin binds to galectin-3 and disrupts its function. Preclinical data in animals have shown that belapectin has robust treatment effects in reversing liver fibrosis and cirrhosis. A Phase 2 study showed belapectin may prevent the development of esophageal varices in NASH cirrhosis, and these results provide the basis for the conduct of the NAVIGATE trial. The NAVIGATE trial (www.NAVIGATEnash.com), titled “A Seamless Adaptive Phase 2b/3, Double-Blind, Randomized, Placebo-controlled Multicenter, International Study Evaluating the Efficacy and Safety of Belapectin (GR-MD-02) for the Prevention of Esophageal Varices in NASH Cirrhosis,” is posted on www.clinicaltrials.gov (NCT04365868). Galectin-3 has a significant role in cancer, and the Company has supported a Phase 1b study in combined immunotherapy of belapectin and KEYTRUDA in advanced melanoma and in head and neck cancer. This trial provided a strong rationale for moving forward into a Company-sponsored Phase 2 development program, which the company is exploring.

About Fatty Liver Disease with Advanced Fibrosis and Cirrhosis
Non-alcoholic steatohepatitis (NASH) has become a common disease of the liver with the rise in obesity and other metabolic diseases. NASH is estimated to affect up to 28 million people in the U.S. It is characterized by the presence of excess fat in the liver along with inflammation and hepatocyte damage (ballooning) in people who consume little or no alcohol. Over time, patients with NASH can develop excessive fibrosis, or scarring of the liver, and ultimately liver cirrhosis. It is estimated that as many as 1 to 2 million individuals in the U.S. will develop cirrhosis as a result of NASH, for which liver transplantation is the only curative treatment available. Approximately 9,000 liver transplants are performed annually in the U.S. There are no drug therapies approved for the treatment of liver fibrosis or cirrhosis.

About Galectin Therapeutics
Galectin Therapeutics is dedicated to developing novel therapies to improve the lives of patients with chronic liver disease and cancer. Galectin’s lead drug belapectin (formerly known as GR-MD-02) is a carbohydrate-based drug that inhibits the galectin-3 protein, which is directly involved in multiple inflammatory, fibrotic, and malignant diseases, for which it has Fast Track designation by the U.S. Food and Drug Administration. The lead development program is in non-alcoholic steatohepatitis (NASH) with cirrhosis, the most advanced form of NASH-related fibrosis. This is the most common liver disease and one of the largest drug development opportunities available today. Additional development programs are in treatment of combination immunotherapy for advanced melanoma and other malignancies. Advancement of these additional clinical programs is largely dependent on finding a suitable partner. Galectin seeks to leverage extensive scientific and development expertise as well as established relationships with

external sources to achieve cost-effective and efficient development. Additional information is available at **www.galectintherapeutics.com**.

Forward Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements relate to future events or future financial performance, and use words such as “may,” “estimate,” “could,” “expect” and others. They are based on management’s current expectations and are subject to factors and uncertainties that could cause actual results to differ materially from those described in the statements. These statements include those regarding the hope that Galectin’s development program for belapectin will lead to the first therapy for the treatment of fatty liver disease with cirrhosis and those regarding the hope that our lead compounds will be successful in cancer immunotherapy and in other therapeutic indications. Factors that could cause actual performance to differ materially from those discussed in the forward-looking statements include, among others, findings of safety of a drug candidate are not indicative of the drug candidate’s efficacy; that trial endpoints required by the FDA may not be achieved; Galectin may not be successful in developing effective treatments and/or obtaining the requisite approvals for the use of belapectin or any of its other drugs in development; the Company may not be successful in scaling up manufacturing and meeting requirements related to chemistry, manufacturing and control matters; the Company’s current clinical trial and any future clinical studies as modified to meet the requirements of the FDA may not produce positive results in a timely fashion, if at all, and could require larger and longer trials, which would be time consuming and costly; plans regarding development, approval and marketing of any of Galectin’s drugs are subject to change at any time based on the changing needs of the Company as determined by management and regulatory agencies; regardless of the results of any of its development programs, Galectin may be unsuccessful in developing partnerships with other companies or raising additional capital that would allow it to further develop and/or fund any studies or trials. Galectin has incurred operating losses since inception, and its ability to successfully develop and market drugs may be impacted by its ability to manage costs and finance continuing operations. Global factors such as coronavirus may continue to impact NASH patient populations around the globe and further affect the trial and significantly impact associated costs. For a discussion of additional factors impacting Galectin’s business, see the Company’s Annual Report on Form 10-K for the year ended December 31, 2021, and subsequent filings with the SEC. You should not place undue reliance on forward-looking statements. Although subsequent events may cause its views to change, management disclaims any obligation to update forward-looking statements.

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