Disc Medicine Presents Positive Clinical and Translational Data Across Portfolio at the 66th American Society of Hematology (ASH) Annual Meeting

December 9, 2024

- *Positive updates across all programs, including updates from ongoing clinical studies and new translational data in preclinical models supporting use in existing and additional indications*
- *Management hosted a conference call during the ASH meeting on Sunday, December 8 discussing highlights of the presented data and next steps for the company*

WATERTOWN, Mass., Dec. 09, 2024 (GLOBE NEWSWIRE) -- Disc Medicine, Inc. (NASDAQ:IRON), a clinical-stage biopharmaceutical company focused on the discovery, development, and commercialization of novel treatments for patients suffering from serious hematologic diseases, today spotlights 8 posters presented at the ASH 2024 annual meeting in San Diego, CA. This year's presentations included updates from the BEACON and AURORA trials of bitopertin in patients with erythropoietic protoporphyria (EPP) and the Phase 1 SAD/MAD trial of DISC-3405 in healthy volunteers. Additionally, Disc presented a real-world patient survey highlighting the disease burden of EPP and multiple preclinical models highlighting the potential benefits of bitopertin, DISC-0974, and DISC-3405 in existing and new indications. The collection of data supports Disc's continued advancement of all three clinical candidates and provides evidence for expansion opportunities in new indications.

In addition to its poster presentations, Disc presented complete results from the Phase 1b trial of DISC-0974 in anemia of myelofibrosis (MF) yesterday, December 8, in an oral presentation. These results demonstrated positive impact on clinically meaningful measures of anemia across a broad range of patient types and support advancement of the program into a Phase 2 trial in MF anemia, which is now initiated. Management hosted a call on Sunday, December 8 to review highlights of data presented throughout the ASH meeting and plans for next steps in development. The archive of the call is accessible on the Events and Presentations page of Disc's website (https://ir.discmedicine.com/).

Bitopertin, DISC-0974, and DISC-3405 are investigational agents and are not approved for use as therapies in any jurisdiction worldwide.

Summary of Poster Presentations

Bitopertin:

Disc is advancing development and registrational activities for bitopertin in EPP, with the potential for accelerated approval using PPIX as a surrogate endpoint.

AURORA:

The AURORA study is a randomized, double-blind, placebo-controlled Phase 2 clinical trial that enrolled 75 adult subjects with EPP. Subjects were randomized 1:1:1 to receive 20 mg of bitopertin (n=26), 60 mg of bitopertin (n=25), or placebo (n=24) orally once daily for 17 weeks.

- Updated analyses show that bitopertin reduced PPIX in all prespecified subgroups across demographic and baseline patient characteristics
- Previously presented analyses showed that reductions in PPIX were associated with improvements in multiple clinical outcomes, including measures of sunlight tolerance, reductions in phototoxic reactions, and patient-reported quality of life

BEACON:

The BEACON study is a Phase 2, randomized, open-label, multiple dose clinical trial that enrolled 22 adults and 4 adolescents with EPP. Subjects were randomized 1:1 to receive 20 mg of bitopertin (n=14) or 60 mg of bitopertin (n=12) orally once daily for 24 weeks.

- Updated analyses show that bitopertin significantly reduced protoporphyrin IX (PPIX) at low and high doses and in both adult and adolescent populations
- Bitopertin had a meaningful impact on light tolerance, with similar benefit shown across adult and adolescent populations
- Reductions in PPIX were associated with improvements in multiple measures of sunlight tolerance
- Bitopertin was generally well tolerated and showed a similar safety profile in adults and adolescents

EPP LIGHT Study:

The EPP LIGHT Study is a patient survey study seeking to comprehensively describe the burden of disease in adults and adolescents with EPP.

- Across adult (n=164) and adolescent (n=33) respondents, EPP symptoms impact all facets of life including ability to be out in the sun for prolonged periods of time, ability to undertake daily activities, deficits in emotional functioning, and absenteeism at work and school
    - 68% of adults and 45% of adolescents experienced pain from a phototoxic reaction after <30 minutes in direct sunlight, and recovery time was an average of 5.5 ± 4.8 days for adults and 5.1 ± 3.0 days for adolescents
    - 75% of adults and 46% of adolescents reported feeling depressed or sad and respondents reported substantially lower satisfaction with social roles and higher feelings of social isolation than the general population
    - 23% of employed adults reported missing work in the past month due to EPP; 24% of adults and 42% of adolescents attending school at the time of the study reported missing school in the past month due to EPP

Phototoxicity Study in Mouse Model of EPP:

The effects of an orally bioavailable glycine transporter 1 (GlyT1) inhibitor, DISC-C, on PPIX levels and skin phototoxicity induced by UV/blue light were evaluated in EPP mice. Results showed:

- Treatment with a mouse analog of bitopertin caused a 37-40% decrease in PPIX levels in red blood cells
- GlyT1 inhibition significantly reduced skin lesions after light exposure; treated mice developed skin lesions in 9.2% of exposed skin area vs. 51.2% in placebo
- Percentage of area with skin lesions correlated with PPIX levels, supporting PPIX as the pathological driver of phototoxicity in EPP

DISC-0974:

DISC-0974+Ruxolitinib Mouse Model:

Wild-type mice were randomized to receive doses of placebo, ruxolitinib, DBIO-100 (a mouse analog of DISC-0974), or a combination of ruxolitinib and DBIO-100. Results showed:

- Ruxolitinib treatment alone reduced hemoglobin by 1.2 g/dL in wild-type mice, inducing anemia
- Adding treatment with DBIO-100 had a positive impact on anemia, increasing hemoglobin by 0.8 g/dL and further enhancing serum iron availability

These results highlight the potential for DISC-0974 to treat anemia of myelofibrosis (MF) in patients where disease-directed therapies such as ruxolitinib can significantly contribute to the development of anemia.

DISC-0974 in a Mouse Model of Inflammatory Bowel Disease (IBD)

The effect of DISC-0974 on improving anemia in a dextran sodium sulfate (DSS)-induced colitis mouse model was evaluated. Results showed:

- Treatment with DBIO-100 (a mouse analog of DISC-0974) suppressed hepcidin, increased serum iron, increased hemoglobin by up to 6 g/dL, and effectively alleviated anemia in IBD mice
- Treated mice also experienced protective effects against IBD, evidenced by attenuated weight loss, decreased disease activity index score, preserved colon length, improved colon histopathology, and reduced markers of inflammation

These results highlight the potential value of DISC-0974 in treating anemia of chronic inflammatory diseases, such as IBD, and add to the body of evidence supporting the application of DISC-0974 to broadly address anemia of inflammation.

DISC-3405:

Healthy Volunteer Study:

Complete SAD/MAD data from the Phase 1 trial of DISC-3405 in healthy volunteers were presented. In the SAD portion of this trial, healthy males and females ages 18 to 65 were given a single dose of placebo (n=10) or DISC-3405 at 75 mg intravenously (IV) (n=6), 37.5 mg subcutaneously (SC) (n=6), 75 mg SC (n=6), 150 mg SC (n=6), or 300 mg SC (n=6). The MAD portion included placebo (n=4), 75 mg SC (n=6), and 150 mg SC (n=6) cohorts dosed every 4 weeks for a total of 2 doses. Results showed:

- DISC-3405 produced dose-related increases in serum hepcidin with corresponding reductions in serum iron across all dose levels
- DISC-3405 resulted in deep reductions in serum iron (ranging from 50-80% from baseline) that were sustained and support a once-monthly SC dosing regimen
- Single and repeat dosing of DISC-3405 demonstrated meaningful reductions in hematologic parameters, including reticulocyte hemoglobin, hemoglobin, and hematocrit
- DISC-3405 was generally well-tolerated at all evaluated dose levels, with no serious adverse events (AEs), greater than Grade 2 AEs, or AEs leading to study withdrawal

These results support Disc's plans to advance the DISC-3405 program into a Phase 2 study in polycythemia vera in 2025.

SCD Mouse Model:

The effect of DISC-3405 in the Townes mouse model of SCD was evaluated. Results showed:

- Treatment with 10 mg/kg dose of a mouse analog of DISC-3405 resulted in iron restriction and a significant decrease in hemoglobin S (HbS) concentration without affecting red blood cell counts
- Also observed a significant decrease in lactate dehydrogenase (LDH), suggesting decreased hemolysis, and decrease in white blood cells, suggesting reduced inflammation

These results highlight the potential value of DISC-3405 in providing therapeutic benefits to SCD patients by reducing HbS concentration within red blood cells.

About Disc Medicine

Disc Medicine is a clinical-stage biopharmaceutical company committed to discovering, developing, and commercializing novel treatments for patients who suffer from serious hematologic diseases. We are building a portfolio of innovative, potentially first-in-class therapeutic candidates that aim to address a wide spectrum of hematologic diseases by targeting fundamental biological pathways of red blood cell biology, specifically heme biosynthesis and iron homeostasis. For more information, please visit www.discmedicine.com.

Disc Cautionary Statement Regarding Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, express or implied statements regarding Disc's expectations with respect to the next stages of its development programs in EPP, MF and polycythemia vera, and with respect to the potential of its development programs in new indications. The use of words such as, but not limited to, "believe," "expect," "estimate," "project," "intend," "future," "potential," "continue," "may," "might," "plan," "will," "should," "seek," "anticipate," or "could" or the negative of these terms and other similar words or expressions that are intended to identify forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on Disc's current beliefs, expectations and assumptions regarding the future of Disc's business, future plans and strategies, clinical results and other future conditions. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Disc may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and investors should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements as a result of a number of material risks and uncertainties including but not limited to: the adequacy of Disc's capital to support its future operations and its ability to successfully initiate and complete clinical trials; the nature, strategy and focus of Disc; the difficulty in predicting the time and cost of development of Disc's product candidates; Disc's plans to research, develop and commercialize its current and future product candidates; the timing of initiation of Disc's planned preclinical studies and clinical trials; the timing of the availability of data from Disc's clinical trials; Disc's ability to identify additional product candidates with significant commercial potential and to expand its pipeline in hematological diseases; the timing and anticipated results of Disc's preclinical studies and clinical trials and the risk that the results of Disc's preclinical studies and clinical trials may not be predictive of future results in connection with future studies or clinical trials and may not support further development and marketing approval; and the other risks and uncertainties described in Disc's filings with the Securities and Exchange Commission, including in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2023, and in subsequent Quarterly Reports on Form 10-Q. Any forward-looking statement speaks only as of the date on which it was made. None of Disc, nor its affiliates, advisors or representatives, undertake any obligation to publicly update or revise any forward-looking statement, whether as result of new information, future events or otherwise, except as required by law.

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