Filed pursuant to Rule 424(b)(3)
SEC File No. 333-269363

PROSPECTUS SUPPLEMENT NO. 5
(to Prospectus dated February 3, 2023)

8,666,666 Shares of Common Stock
Warrants to Purchase up to 17,333,332 Shares of Common Stock
Up to 17,333,332 Shares of Common Stock underlying Warrants
Pre-Funded Warrants to purchase up to 8,666,666 Shares of Common Stock
Up to 8,666,666 Shares of Common Stock underlying Pre-Funded Warrants

Tenax Therapeutics, Inc.

This prospectus supplement updates, amends and supplements the prospectus dated February 3, 2023, as amended by Prospectus Supplement No. 1 dated March 31, 2023, Prospectus Supplement No. 2 dated April 13, 2023, Prospectus Supplement No. 3 dated May 31, 2023 and Prospectus Supplement No. 4 dated June 13, 2023 (the "Prospectus"), which forms a part of our Registration Statement on Form S-1 (Registration No. 333- 269363). Capitalized terms used in this prospectus supplement and not otherwise defined herein have the meanings specified in the Prospectus.

This prospectus supplement is being filed to update, amend and supplement the information included in the Prospectus with information contained in our Current Report on Form 8-K filed with the SEC on July 19, 2023, which is set forth below.

This prospectus supplement is not complete without the Prospectus. This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement, and is qualified by reference thereto, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the Prospectus. Please keep this prospectus supplement with your Prospectus for future reference.

Our Common Stock is listed on The Nasdaq Capital Market ("Nasdaq") under the symbol "TENX." The last reported closing price for our Common Stock on Nasdaq on July 18, 2023 was $0.3143 per share.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 16 of the Prospectus for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of the disclosures in the prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is July 19, 2023

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 19, 2023

Tenax Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**001-34600**	**26-2593535**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

101 Glen Lennox Drive, Suite 300
Chapel Hill, North Carolina 27517
(Address of principal executive offices) (Zip Code)

919-855-2100
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	TENX	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR 230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR 240.12b-2).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01 Other Events.

On July 19, 2023, Tenax Therapeutics, Inc. issued a press release announcing that the United States Patent and Trademark Office (USPTO) has granted a new method of use patent for oral levosimendan (TNX-103) in the treatment of Pulmonary Hypertension with Heart Failure with Preserved Ejection Fraction (PH-HFpEF), expiring in 2040. A copy of the press release is attached hereto as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release dated July 19, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: July 19, 2023

Tenax Therapeutics, Inc.

By: /s/ Christopher T. Giordano
Christopher T. Giordano
President and Chief Executive Officer

EXHIBIT 99.1

Tenax Therapeutics Issued U.S. Patent for Oral Levosimendan in Pulmonary Hypertension with Heart Failure with Preserved Ejection Fraction (PH-HFpEF)

- *New U.S. patent provides intellectual property (IP) protection until December 2040, and may qualify for term extension beyond 2040*
- *There are currently no FDA-approved treatments for PH-HFpEF, a condition affecting more than 1,600,000 North Americans, with estimates indicating a prevalence of more than 2,000,000 patients by 2030*
- *Broadens Tenax's U.S. IP protection for a market with the potential to generate billions in future estimated annual sales*
- *Levosimendan is the only drug to show statistically significant improvement in the 6-minute walk endpoint in this large patient population (Phase 2 HELP Study)*
- *Tenax intends to initiate a Phase 3 trial using TNX-103 (oral levosimendan) in 2023*

CHAPEL HILL, N.C., JULY 19 , 2023 (GLOBE NEWSWIRE) -- Tenax Therapeutics (Formerly Known As Oxygen Biotherapeutics, Inc.), Inc. (Nasdaq: TENX), a specialty pharmaceutical company focused on identifying, developing and commercializing products that address cardiovascular and pulmonary diseases with high unmet medical need, announced today that the United States Patent and Trademark Office (USPTO) has granted a new method of use patent for oral levosimendan (TNX-103) in the treatment of pulmonary hypertension with heart failure with preserved ejection fraction (PH-HFpEF), expiring in 2040.

The issued patent (U.S. Patent No. 11,701,355) covers the use of oral levosimendan for the treatment of PH-HFpEF and provides exclusivity through December 2040. The '355 patent further builds upon the Company's substantial IP, which also includes issued U.S. patents for the use of intravenous (U.S. Patent No. 11,607,412) and subcutaneous (U.S. Patent No. 11,213,524) formulations of levosimendan for the treatment of PH-HFpEF.

"The issuance of patent '355 is a very important achievement in protecting the discoveries made with the HELP Study, while also preserving for our shareholders the substantial commercial value of potentially developing the first drug to treat this large and underserved patient population," said Chris Giordano, Chief Executive Officer of Tenax Therapeutics. "With this patent now in hand, providing us a potential commercial runway to December 2040, we are excited to be moving into Phase 3 testing with the oral formulation, where we hope to demonstrate the ability of TNX-103 to address this significant unmet need in patients with PH-HFpEF."

Stuart Rich MD, Chief Medical Officer of Tenax Therapeutics commented, "The advancement of TNX-103 represents a transformative opportunity to establish a treatment for patients with PH-HFpEF. This is the most commonly seen patient in pulmonary hypertension referral centers, and yet not a single therapy has been approved for them. Finally, the unmet need of these patients may now be addressed."

Tenax Therapeutics is actively engaged with its Scientific Advisory Board, the FDA, and a CRO partner regarding the execution of a Phase 3 trial of TNX-103, planned to commence in 2023.

About Levosimendan (TNX-101, TNX-102, and TNX-103)

Levosimendan is a unique potassium ATP channel activator and calcium sensitizer that affects the heart and vascular system through multiple mechanisms of action. Initially discovered and developed by Orion Corporation in Finland, intravenous levosimendan is approved in over 58 countries outside the United States for use in hospitalized patients with acutely decompensated heart failure. Tenax Therapeutics has North American rights to develop and commercialize IV (TNX-101), subcutaneous (TNX-102), and oral (TNX-103) formulations of levosimendan. Results of Tenax Therapeutics' Phase 2 HELP trial of levosimendan in patients with pulmonary hypertension (PH) and heart failure with preserved ejection fraction (HFpEF) demonstrated that IV levosimendan produces potent dilation of the central and pulmonary venous circulations which translates into an improvement in exercise capacity, a discovery that forms the basis for the Phase 3 investigation of Tenax Therapeutics' potential groundbreaking therapy. To date, no other drug therapy has improved exercise tolerance in patients with PH associated with HFpEF, "a growing epidemic with high morbidity and mortality and no treatment. The clear unmet need and lethal nature of PH-HFpEF must be met with novel solutions at all levels of therapeutic development." (AHA Scientific Advisory, "A Call to Action," 2022).

About Imatinib (TNX-201)

Tenax Therapeutics is developing novel dosing and a unique formulation of imatinib mesylate, a kinase inhibitor that has received FDA's orphan designation (March 2020) for the treatment of pulmonary arterial hypertension (PAH). The IMPRES trial, a previous Phase 3 trial, demonstrated that oral imatinib may produce a markedly greater, and much more durable, treatment effect on exercise tolerance, than any other available PAH treatment, alone or in combination, based on the results observed in those patients who were maintained on the full imatinib dose for the majority of the trial. Despite the availability of several classes of pulmonary vasodilators, no existing treatment has been shown to halt progression or induce regression of the disease. Imatinib acts on underlying cellular proliferative pathways associated with PAH and has the potential to be approved as a disease modifying therapy for PAH.

About Tenax Therapeutics

Tenax Therapeutics, Inc. is a specialty pharmaceutical company focused on identifying, developing, and commercializing products that address cardiovascular and pulmonary diseases with high unmet medical need. The Company owns North American rights to develop and commercialize subcutaneous and oral formulations of levosimendan. Tenax Therapeutics also is developing a unique oral formulation of imatinib. For more information, visit www.tenaxthera.com. Tenax's common stock is listed on The Nasdaq Stock Market LLC under the symbol "TENX".

Caution Regarding Forward-Looking Statements

Except for historical information, all of the statements, expectations and assumptions contained in this press release are forward-looking statements. Actual results might differ materially from those explicit or implicit in the forward-looking statements. Important factors that could cause actual results to differ materially include: risks related to our business strategy, including the prioritization of product candidates; risks of our clinical trials, including, but not limited to, the timing, delays, costs, design, initiation, enrollment, and results of such trials; any delays in regulatory review and approval of product candidates in development; reliance on third parties, including Orion Corporation, our manufacturers and CROs; risks regarding the formulation, production, marketing, customer acceptance and clinical utility of our product candidates; our estimates regarding the potential market opportunity for our product candidates; the potential advantages of our product candidates; our competitive position; intellectual property risks; our ability to raise additional money to fund our operations for at least the next 12 months as a going concern; risks related to our continued listing on Nasdaq; our ability to maintain our culture and recruit, integrate and retain qualified personnel and advisors, including on our Board of Directors; volatility and uncertainty in the global economy and financial markets in light of the COVID-19 pandemic or similar health epidemics and geopolitical uncertainties such as in Ukraine; changes in legal, regulatory and legislative environments in the markets in which we operate and the impact of these changes on our ability to obtain regulatory approval for our products; and other risks and uncertainties set forth from time to time in our SEC filings. Tenax Therapeutics assumes no obligation and does not intend to update these forward-looking statements except as required by law.

Contacts

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