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): November 22, 2021

DIFFUSION PHARMACEUTICALS INC.

(Exact name of registrant as specified in its charter)

Delaware	**000-24477**	**30-0645032**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

300 East Main Street, Suite 201 **Charlottesville, Virginia**	**22902**
(Address of principal executive offices)	(Zip Code)

(434) 220-0718
(Registrant's telephone number, including area code)

Not applicable
(Former name or former address, if changed since last report)

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, par value $0.001 per share	DFFN	NASDAQ Capital Market

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

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 November 22, 2021, Diffusion Pharmaceuticals Inc. (the "Company") issued a press release announcing the dosing of the first participants in its Altitude Trial evaluating the Company's lead product candidate, trans sodium crocetinate, in normal healthy volunteers subjected to incremental levels of physical exertion while exposed to hypoxic and hypobaric conditions, or "simulated altitude." A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01 – Financial Statements and Exhibits

(d) Exhibits

Exhibit Number	**Description**
99.1	Press Release, issued November 22, 2021
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

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

Dated: November 24, 2021

DIFFUSION PHARMACEUTICALS INC.

By: /s/ William Elder

Name: William Elder

Title: General Counsel

Diffusio$_2$n Pharmaceuticals Inc.

Diffusion Pharmaceuticals Doses First Participants in Altitude Trial

Second of Three TSC Oxygenation Trials

CHARLOTTESVILLE, Va. (November 22, 2021) – Diffusion Pharmaceuticals Inc. (NASDAQ: DFFN) ("Diffusion" or the "Company"), a biopharmaceutical company developing novel therapies that enhance the body's ability to deliver oxygen to areas where it is needed most, today announced it has dosed the first participants in its Altitude Trial. The trial will evaluate the Company's lead product candidate, trans sodium crocetinate ("TSC"), in normal healthy volunteers subjected to incremental levels of physical exertion while exposed to hypoxic and hypobaric conditions, or "simulated altitude."

"It's been exciting working with our internationally recognized partners to get this trial started, and we look forward to continuing to leverage their expertise in hypoxia research and their unique extreme exposure simulation facilities as the study proceeds," said Chris Galloway, M.D., Chief Medical Officer of Diffusion. "We designed the Altitude Trial not only to evaluate how TSC can enhance oxygen uptake in a simulated hypoxic environment while under stress, but also to evaluate how effectively oxygen is delivered and ultimately utilized under these conditions. We believe the Altitude Trial's results can inform additional clinical uses of TSC to enhance oxygenation across a multitude of diseases complicated by hypoxia."

The Altitude Trial is a double-blind, randomized, placebo-controlled crossover study designed to evaluate the effects of TSC on maximal oxygen consumption, or VO2, and partial pressure of blood oxygen, or PaO2, in normal healthy volunteers subjected to incremental levels of physical exertion while exposed to "simulated altitude." Diffusion intends to enroll 30 healthy volunteers and give each volunteer a single dose of TSC at one of three different doses. This study will evaluate the effectiveness of TSC in enhancing oxygen delivery to the blood and tissues during exercise under hypoxic conditions. The Company anticipates completing the study in late December 2021 or early January 2022, subject to the pace of participant enrollment, and reporting topline results within two months of study completion.

The Altitude Trial is the second in a series of three, short-term studies Diffusion is conducting intended to provide the Company with additional information regarding TSC's mechanism of action and dose-response characteristics. The results of the Altitude Trial, together with the results of the Company's TCOM Trial (announced in June 2021) and its ILD-DLCO Trial, expected to commence in December 2021, will be used to further inform the design of clinical trials aimed at supporting the commercialization of TSC as a treatment for conditions complicated by hypoxia.

While the Company intends to continue developing data to support TSC's broad potential uses, it recently announced that its near-term focus will be the design and execution of a clinical program to support the use of intravenously administered TSC as a treatment for hypoxic solid tumors, and that it intends to obtain input from the U.S. Food and Drug Administration on the program's design in early 2022.

About Diffusion Pharmaceuticals Inc.

Diffusion Pharmaceuticals Inc. is a biopharmaceutical company developing novel therapies that enhance the body's ability to deliver oxygen to areas where it is needed most. Diffusion's lead product candidate, TSC, is being developed to enhance the diffusion of oxygen to tissues with low oxygen levels, also known as hypoxia, a serious complication of many of medicine's most intractable and difficult-to-treat conditions, including hypoxic solid tumors. In November 2021, based on the preclinical and clinical data accumulated to date and the significant unmet medical need, Diffusion announced that its near-term focus will be the design and execution of a clinical program to support the use of intravenously administered TSC as a treatment for hypoxic solid tumors. For more information, please visit us at www.diffusionpharma.com.

Forward-Looking Statements

This press release includes express and implied forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including regarding the Company's near-term strategic priorities, anticipated timelines for the initiation, completion, and announcement of data from the Company's Oxygenation Trials and Hypoxic Solid Tumor Program, the relevance and significance of any such data, and the potential therapeutic value of TSC. The Company may, in some cases, use terms such as "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "approximately," or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Although the Company believes that it has a reasonable basis for each forward-looking statement contained herein, forward-looking statements by their nature involve risks and uncertainties, known and unknown, many of which are beyond the Company's control and, as a result, the Company's actual results could differ materially from those expressed or implied in any forward-looking statement. Particular risk and uncertainties include, among other things, those related to: the Company's ability to design, initiate, enroll, execute, and complete its planned studies evaluating TSC; the likelihood and timing of regulatory approval of TSC, if any, for the treatment of solid tumors complicated by hypoxia or any other indication, or the nature of any feedback the Company may receive from the U.S. Food and Drug Administration or other regulatory bodies; the impact of supply chain and other supplier issues on the Company's clinical development program and associated timelines; the Company's ability to protect and expand its intellectual property portfolio; the Company's ability to maintain compliance with the continued listing standards of Nasdaq; general economic, political, business, industry, and market conditions, including the ongoing COVID-19 pandemic; and the other factors discussed under the heading "Risk Factors" in the Company's filings most recent Annual Report on Form 10-K and other filings with the U.S. Securities and Exchange Commission. Any forward-looking statements in this press release speak only as of the date hereof (or such earlier date as may be identified) and, except as required by applicable law, rule, or regulation, the Company undertakes no obligation to update any such statements after the date hereof.

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