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): March 18, 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.)

1317 Carlton Avenue, Suite 200 **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 7.01 Regulation FD Disclosure

Certain information concerning the business, clinical studies, development plans, and financial position of Diffusion Pharmaceuticals Inc. (the "Company" or "we") that we expect to use at certain conferences, meetings, and presentations will be made available on our website, www.diffusionpharma.com, under "Investors – Presentations" on or about March 18, 2021. Representatives of the Company may use this presentation, in whole or in part, and possibly with non-material modifications, periodically in connection with conferences, meetings, and presentations to investors, analysts and others.

The information contained in the presentation is summary information that is intended to be considered in the context of the Company's filings with the Securities and Exchange Commission ("SEC") and other public announcements that we may make, by press release or otherwise, from time to time. The Company undertakes no duty or obligation to publicly update or revise the information contained in the presentation except as required by applicable law, although the Company may do so from time to time as its management believes is warranted. Any such updating may be made through the filing of other reports or documents with the SEC, through press releases, or through other public disclosure.

The Company makes no admission or representation as to the materiality of any information in the presentation or otherwise contained in this Current Report on Form 8-K. The information in this Current Report on Form 8-K is furnished pursuant to Item 7.01 of Form 8-K and shall not be deemed to be "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of Section 18 of the Exchange Act unless we specifically incorporate it by reference in a document filed under the Exchange Act, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as previously set forth by specific reference in such a filing.

Item 8.01 Other Events

On March 18, 2021, the Company issued a press release announcing the dosing of the first participants in the Company's Phase 1 trial of its novel, oxygen enhancing therapeutic, trans sodium crocetinate ("TSC"), utilizing a transcutaneous oxygen monitoring device to evaluate the effects of TSC on peripheral tissue oxygenation. A copy of the press release is attached hereto as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 9.01 – Financial Statements and Exhibits

(d) Exhibits

Exhibit Number	**Description**
99.1	Press Release, issued March 18, 2021

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: March 18, 2021

DIFFUSION PHARMACEUTICALS INC.

By: /s/ William Elder
Name: William Elder
Title: General Counsel

Exhibit 99.1

Diffusion Pharmaceuticals Doses First Participants in TCOM Study

CHARLOTTESVILLE, Va., March 18, 2021 -- **Diffusion Pharmaceuticals Inc. (NASDAQ: DFFN)** ("Diffusion" or the "Company"), an innovative biopharmaceutical company developing novel therapies that enhance the body's ability to deliver oxygen to areas where it is needed most, today announced that it has dosed the first participants in the Company's Phase 1 trial of its novel, oxygen enhancing therapeutic, trans sodium crocetinate ("TSC"), utilizing a transcutaneous oxygen monitoring (TCOM) device to evaluate the effects of TSC on peripheral tissue oxygenation.

The TCOM trial is the first in a series of three, short-term studies Diffusion plans to conduct in the United States in 2021. Together, the oxygenation trials, which the Company plans to fund with cash-on-hand, will serve as a prospective exploration of the relationship between the level of TSC exposure (dose) and response (change in oxygenation). The results will be used to inform the next phases of clinical development and commercialization plans.

The TCOM trial is a randomized, double blind, placebo controlled, pharmacokinetic, pharmacodynamic study of TSC that will enroll up to 30 healthy volunteers. Trial participants will be randomized into one of six subgroups and receive a single intravenous dose of TSC or placebo. Patients receiving TSC will be randomly assigned to receive one of five different doses ranging from 0.5-2.5 mg/kg. All trial participants will receive supplemental oxygen during equivalent monitoring periods before and after TSC is administered while being continuously monitored with transcutaneous oximetry sensors applied to the lower extremity. The primary endpoint will be the change in TCOM readings after TSC administration relative to the participants pre-dose baseline TCOM readings. Diffusion anticipates that the TCOM trial will be completed in 2Q21.

"We anticipate the TCOM trial will provide important information about TSC's ability to enhance oxygen delivery to tissues," said Christopher Galloway, M.D., Chief Medical Officer of Diffusion. "We are excited to obtain objective evidence of the drug's exposure-response relationship with oxygenation and eager to incorporate that knowledge into the next phase of our clinical development strategy."

Near-term Clinical Strategy
In addition to the TCOM trial, the Company plans two additional oxygenation trials as follows:

- **Hypoxia Trial:** This is expected to be a double-blind, randomized, placebo-controlled study which will 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 hypoxic and hypobaric conditions.

- **DLCO Trial:** This is expected to be a double-blind, randomized, placebo-controlled study which will evaluate the effects of TSC on the diffusion of carbon monoxide through the lungs, also known as DLCO, in patients with previously diagnosed interstitial lung disease who have a baseline DLCO test result that is abnormal. DLCO will act as a surrogate measure of oxygen transfer efficiency, or uptake, from the alveoli of the lungs, through the plasma, and onto hemoglobin within red blood cells.

Diffusion plans to initiate both of these studies in 3Q21.

The Company anticipates that positive data from one or more of the three oxygenation trials will guide the next steps in the TSC clinical development strategy, which will focus on demonstrating the therapeutic benefits of TSC in a relevant patient population affected by hypoxia. The Company expects to identify and announce this specific, hypoxia-related indication on which it will focus further clinical development in 4Q21. The Company then plans to initiate a Phase 2 clinical outcome study evaluating TSC in the announced indication, during the first quarter of 2022.

About Diffusion Pharmaceuticals Inc.
Diffusion Pharmaceuticals Inc. is an innovative 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. In addition to TSC, Diffusion's product candidate DFN-529, a novel, allosteric PI3K/Akt/mTOR Pathway inhibitor, is in early-stage development. 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 anticipated cash runway, its near-term strategic priorities, and anticipated timelines for the initiation, completion, and announcement of data from the Company's [ongoing and] planned oxygenation trials. 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 ongoing and planned studies evaluating TSC; 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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