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): February 16, 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 8.01 Other Information.

On February 16, 2021, Diffusion Pharmaceuticals Inc. (the "Company") issued a press release announcing the completion of its Phase 1b study of its product candidate, trans sodium crocetinate, in hospitalized COVID-19. A copy of the press release is attached 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

99.1 Press Release, issued February 16, 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: February 16, 2021

DIFFUSION PHARMACEUTICALS INC.

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

Exhibit 99.1

Diffusion Pharmaceuticals Completes Phase 1b Study of TSC in Hospitalized COVID-19 Patients

No Dose Limiting Toxicities or Serious Adverse Events Observed in Dosing Regimen Previously Untested in Clinical Trial Setting

CHARLOTTESVILLE, Va., February 16, 2021 -- **Diffusion Pharmaceuticals Inc. (NASDAQ: DFFN)** ("Diffusion" or the "Company"), an innovative biopharmaceutical company developing novel therapies to deliver oxygen to areas of the body where it is needed most, today announced completion and topline data from the open-label, Phase 1b clinical trial of its novel, diffusion-enhancing therapeutic, trans sodium crocetinate ("TSC"), in hospitalized COVID-19 patients with confirmed hypoxemia, the most common cause of tissue hypoxia.

The primary objective of the trial was to evaluate the safety and tolerability of TSC administered on a more frequent dosing regimen not previously tested in a clinical trial setting. Secondary endpoints included pharmacokinetic measurement of TSC levels after dosing, relative improvements in blood oxygen levels, and certain other clinical parameters related to COVID-19.

In this trial, patients were divided into four sequential cohorts of six patients, with each patient in a dose cohort receiving the same intravenous doses of 0.25 mg/kg, 0.5 mg/kg, 1.0 mg/kg, or 1.5 mg/kg, depending on the patient's cohort. All patients in the study were administered intravenous doses of TSC every six hours for a minimum of five days and up to 15 days. On Friday, February 12, 2021, the external safety monitoring committee, established as part of the trial protocol, met to review safety data from the final, 1.5 mg/kg dose, cohort and determined that no dose-limiting toxicities or serious adverse events were observed. This result is consistent with the committee's determinations following their analyses of the safety data from each of the other dose cohorts in the trial. Evaluation of secondary endpoint data is ongoing and will be available early in the second quarter of 2021.

"We are grateful to the patients and the dedicated healthcare providers who volunteered to participate in this critically important study," said Chris Galloway, M.D., Chief Medical Officer.. "We believe TSC's diffusion-enhancing mechanism of action has the potential to provide benefits in numerous medical conditions complicated by hypoxia, including COVID-19. The safety, tolerability, and repeat escalating-dose pharmacokinetic data obtained from this study will support our broader TSC development program."

As previously announced, the company plans two additional clinical studies designed to evaluate the efficacy of TSC on both ends of oxygen's complete journey through the body, from improving uptake in the lungs to enhancing delivery from the microcirculation into tissue.

The first study (the "TCOM Study") will measure the effects of TSC on peripheral tissue oxygen delivery using a device called a transcutaneous oximeter, or TCOM. This will be a randomized, blinded and placebo-controlled trial in healthy volunteers to determine TSC's ability to enhance oxygen delivery versus placebo. Diffusion expects to initiate the TCOM Study by the end of the first quarter 2021 and complete it in the second quarter of 2021. Topline data should be available within one to two months following study completion.

The second study (the “DLCO Study”) will measure the effects of TSC on the ability of the lungs to transfer gas from inspired air to the bloodstream, using carbon monoxide as a surrogate for oxygen. The DLCO Study will be conducted in patients with previously diagnosed interstitial lung disease. Diffusion plans to commence the DLCO Study in the second quarter of 2021 and complete it in the third quarter of 2021; topline results should be available within one to two months of study completion and will inform the company’s ongoing TSC development plan.

The Company anticipates that these studies will provide important dose-response data that will guide its product and commercial development strategies, which will focus on treatment of conditions related to the hypoxia continuum. Diffusion intends to announce certain additional information regarding these strategies later in the first quarter of 2021.

About TSC

TSC was designed to enhance the level of organization among water molecules by increasing the amount of hydrogen bonding and 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 clinical studies, when dosed up to four times daily, TSC has been demonstrated safe and tolerable in more than 180 patients included in trials across a variety of indications including patients with glioblastoma multiforme brain cancer (“GBM”), peripheral artery disease with intermittent claudication, stroke, and COVID-19. In pre-clinical data, TSC has been observed to affect oxygen diffusion to hypoxic tissues and provide a functional benefit in animal models of GBM, acute respiratory distress syndrome/acute lung injury, hemorrhagic shock, and ischemic stroke.

About Diffusion Pharmaceuticals Inc.
Diffusion Pharmaceuticals Inc. is an innovative biopharmaceutical company developing novel therapies to deliver oxygen to areas of the body 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 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 statements regarding (i) the anticipated timing of further announcements regarding the Company’s Phase 1b clinical trial and (ii) the Company’s future development plans for TSC and the timing of certain milestones related thereto. 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 risks and uncertainties include, among other things, those related to: the Company’s ability to design, initiate, execute, and complete its ongoing and planned studies evaluating TSC; the Company’s ability to obtain additional financing; the Company’s ability to develop, obtain regulatory approval for, and commercialize TSC or any other product candidate; the ongoing COVID-19 pandemic; general economic, political, business, industry, and market conditions; and the other factors discussed under the heading “Risk Factors” in the Company’s most recent Annual Report on Form 10-K and its 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.

Contacts

Investors:
Tiberend Strategic Advisors, Inc.
Maureen McEnroe, CFA/Miriam Weber Miller
(212) 375-2664/ (212) 375-2694
mmcenroe@tiberend.com/mmiller@tiberend.com

Media:
Jeffrey Freedman
RooneyPartners
(646) 432-0191
jfreedman@rooneyco.com