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): August 11, 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** (Address of principal executive offices)	**22902** (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 2.02 Results of Operations and Financial Condition

On August 11, 2021, Diffusion Pharmaceuticals Inc. (the "Company") issued a press release announcing financial results for the three-month period ended June 30, 2021 and a business update. A copy of that press release is attached hereto as Exhibit 99.1 and incorporated herein by reference.

The information included in or incorporated by reference into this Item 2.02 (including Exhibit 99.1) is being furnished pursuant to Item 2.02 of Form 8-K and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed to be incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act.

Item 9.01 – Financial Statements and Exhibits

(d) Exhibits

Exhibit Number	Description
99.1	Press Release, issued August 11, 2021, announcing financial results for the three-month period ended June 30, 2021 and business update
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: August 13, 2021

DIFFUSION PHARMACEUTICALS INC.
By: /s/ William Elder
Name: William Elder
Title: General Counsel

Diffusion Pharmaceuticals Reports Q2 Financial Results and Provides Business Update

- Reports Improved Outcomes in Phase 1b COVID-19 Study and Positive Trend in Peripheral Oxygenation in Phase 1b TCOM Study
- Expects to Announce Initial Indication and Regulatory Pathway in Fourth Quarter of 2021 and Initiate Clinical Outcome Study in First Half of 2022
- Anticipates Cash Runway through 2023, Including Completion of TSC Phase 2b Program

CHARLOTTESVILLE, Va., August 11, 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 financial results for the second quarter of 2021 and provided a business update.

"We met our key milestones for the first half of 2021, completing and announcing topline results from our COVID-19 Trial and the first of our Oxygenation Trials. Our development plan remains on track. With the positive outcomes of the COVID-19 and TCOM studies, as well as our significant capital raise in the first quarter, we believe we have the data and the financial capacity to execute our clinical development strategy for TSC through Phase 2b. For the remainder of 2021, we are focused on the design and execution of the remaining two Oxygenation Trials to further our understanding of TSC's mechanism of action and potential, as well as the further development of our regulatory and commercial strategy for TSC," said Robert Cobuzzi, Jr. Ph.D., President and CEO of Diffusion.

TSC Q2 Development Update

- In May 2021, Diffusion reported final results from its Phase 1b trial (the "COVID-19 Trial") of trans sodium crocetinate ("TSC") in hospitalized COVID-19 patients. Although the study was not designed or powered to evaluate efficacy, the study's external safety monitoring committee observed that patients receiving the 1.5 mg/kg dose of TSC had improved outcomes in secondary and exploratory endpoints compared to those receiving lower doses. The final results were consistent with topline results previously announced in February 2021, indicating that TSC was safe and well-tolerated when administered on a more frequent dosing regimen than previously tested in a clinical trial setting.
- In June 2021, the Company reported a positive trend in oxygenation from its Phase 1b trial (the "TCOM Trial") evaluating TSC using transcutaneous oxygen monitoring ("TCOM"). The TCOM Trial was designed to evaluate the effect of TSC versus placebo on peripheral tissue oxygenation in healthy normal volunteers. Topline results based upon analyses of primary endpoint data indicated, as compared to placebo, a positive dose-response trend in TCOM readings after TSC administration that persisted through the measurement period with no evidence of hyperoxygenation. TSC was also safe and well-tolerated at all doses tested.

TSC Development Plans for 2021 and 2022

The positive trend observed in the TCOM Trial is being used to guide dose selection in the additional Oxygenation Trials planned for the latter part of 2021 – the Altitude Trial, followed by the ILD-DLCO Trial.

- **Altitude Trial (formerly known as the Induced Hypoxia Trial):** This trial will 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 (i.e., simulated altitude). The study is designed to evaluate the effect of TSC versus placebo on maximal oxygen consumption and partial pressure of blood oxygen. Diffusion anticipates initiating and completing the Altitude Trial in the fourth quarter of 2021, with topline results available within one to two months of study completion.

- **ILD - DLCO Trial:** This trial will be a double-blind, randomized, placebo-controlled study which will evaluate the effects of TSC on the diffusion of carbon monoxide through the lungs ("DLCO") in patients with previously diagnosed interstitial lung disease ("ILD") 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. The study will be statistically powered to evaluate the difference in effect of TSC versus placebo on improvement in DLCO as well as in a standard six-minute walk test. Diffusion now anticipates initiating the ILD-DLCO Trial in the late fourth quarter of 2021 and completing the trial in the first quarter of 2022, with topline results available within one to two months of study completion.

Diffusion expects to announce in the fourth quarter of 2021 the initial indication in which TSC will be studied to support the planned pathway for regulatory approval and to initiate a controlled, clinical outcome study evaluating TSC in the chosen indication during the first half of 2022, funded with cash-on-hand.

Operating and Leadership Team Developments

During the second quarter, Diffusion enhanced its operating team with the addition of new employees in the areas of administration, quality assurance, clinical operations, and finance. In addition, in connection with the Diffusion's annual meeting of stockholders in June 2021, Jane H. Hollingsworth was elected as the new chair of the Company's board of directors and Diana Lanchoney, M.D. and Eric Francois were newly elected to the board of directors. The Company believes these organizational additions have already had a significant, positive impact on its ability to develop, implement and execute on its corporate strategy and development plans, and position the Company well to build shareholder value through its next stage of growth.

2Q21 Financial Results

- Research and development expenses in the second quarter were $2.0 million compared to expenses of $2.2 million in the prior year period. The decrease was attributable to the wind-down of the Company's clinical trial evaluating TSC in glioblastoma multiforme brain cancer and its COVID-19 Trial completed in February 2021. These decreases were offset by increased headcount and costs related to the TCOM Trial.

- General and administrative expenses were $1.8 million during the second quarter of 2021 versus $1.5 million in the comparable quarter last year. The increase compared to the prior year period was primarily attributable to increased salaries, wages, stock-based compensation, and professional fees related to increased headcount and costs associated with the separation of former employees that will not recur in future years.

- As of June 30, 2021, Diffusion had cash and cash equivalents of approximately $43.3 million as compared to $18.5 million as of December 31, 2020.

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, anticipated timelines for the initiation, completion, and announcement of data from the Company's planned Oxygenation Trials, the impact of organizational changes 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 optimal doses and dosing regimens of TSC in connection with the potential treatment of any particular disease or indication; 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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