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): May 8, 2018

DECIPHERA PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-38219**	**30-1003521**
(State or other jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification Number)**

500 Totten Pond Road **Waltham, MA**	**02451**
(Address of registrant's principal executive office)	**(Zip code)**

(781) 209-6400
(Registrant's telephone number, including area code)

N/A
(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 203.425)

☐ 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))

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

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 May 8, 2018, Deciphera Pharmaceuticals, Inc. announced its financial results for the quarter ended March 31, 2018. A copy of the press release in connection with the announcement is being furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Current Report on Form 8-K (including Exhibit 99.1 attached hereto) is intended to be furnished and shall not be deemed "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 incorporated by reference in any filing under the Securities Act of 1933, as amended or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release issued by Deciphera Pharmaceuticals, Inc. on May 8, 2018, furnished herewith.

EXHIBIT INDEX

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99.1	Press Release issued by Deciphera Pharmaceuticals, Inc. on May 8, 2018, furnished herewith.

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: May 8, 2018

DECIPHERA PHARMACEUTICALS, INC.

By: /s/ Michael D. Taylor
Michael D. Taylor
President and Chief Executive Officer

Exhibit 99.1

Deciphera Pharmaceuticals, Inc. Announces First Quarter 2018 Financial Results

- Cash Balance of $180MM to Drive Clinical Development of a Pipeline of Novel Kinase Switch Control Inhibitors -

- Enrollment in Pivotal Phase 3 Study of DCC-2618 in 4th-Line and 4th-Line Plus GIST Ongoing; Pivotal Phase 3 Study in 2nd-Line GIST on Track to Commence Later this Year -

- Updated Data from Phase 1 DCC-2618 Expansion Study to be Presented at ASCO Annual Meeting in June -

Waltham, MA – May 8, 2018 – Deciphera Pharmaceuticals, Inc. (NASDAQ:DCPH), a clinical-stage biopharmaceutical company focused on addressing key mechanisms of tumor drug resistance, today announced financial results for the first quarter ended March 31, 2018, and provided an update on recent clinical and corporate developments.

“Deciphera is off to a strong start in 2018, with data presented at last month’s AACR Annual Meeting adding to the growing body of research supporting the favorable safety and tolerability profile of DCC-2618, our lead product candidate, and its ability to inhibit a broad range of primary and secondary KIT mutations and primary PDGFRα mutations that arise in drug resistant gastrointestinal stromal tumor patients,” said Michael D. Taylor, Ph.D., President and Chief Executive Officer of Deciphera. “We look forward to presenting additional data from the Phase 1 DCC-2618 expansion study throughout the year, including at the upcoming ASCO meeting in June. Enrollment in our ongoing Phase 3 INVICTUS study in fourth-line and fourth-line plus GIST is proceeding on track, and we continue to expect the initiation of a second pivotal study in second-line GIST later this year.”

Clinical Programs

- **DCC-2618**
  - Reported preclinical data at the Annual Meeting of the American Association for Cancer Research (AACR) in April 2018 demonstrating that compared to the *in vitro* profiles of the FDA-approved kinase inhibitors imatinib, sunitinib, regorafenib, and midostaurin, and the investigational agent avapritinib (BLU-285), DCC-2618 demonstrated the broadest profile of inhibition of primary and secondary KIT mutations and primary PDGFRα mutations.
  - The Company also reported updated clinical data at the 2018 AACR Annual Meeting demonstrating the safety and tolerability profile of DCC-2618 in 100 GIST patients treated at the recommended Phase 2 dose of 150 mg QD, which supports the selection of this dose for the ongoing pivotal, randomized Phase 3 INVICTUS study. As of March 19, 2018, 81 of 137 GIST patients treated at 100 mg or more per day and enrolled as of the cut-off date of January 18, 2018, remained on study. Of these, 46 patients were treated for more than six months, including 10 patients who were treated for more than 12 months.
  - Enrollment continues in the dose expansion stage of the ongoing Phase 1 clinical trial for DCC-2618 in patients with solid tumors, including GIST and systemic mastocytosis. The Company will present updated data from this clinical trial in a poster presentation and discussion titled “Mutation profile of drug resistant gastrointestinal stromal tumor (GIST) patients (pts) enrolled in the phase 1 study of DCC-2618,” at the 2018 American Society of Clinical Oncology (ASCO) Annual Meeting on Saturday, June 2, 2018 in Chicago, Illinois.

- **Rebastinib**
    - Investigators at Albert Einstein College of Medicine presented preliminary clinical data at the 2018 AACR Annual Meeting from their ongoing Phase 1b study with rebastinib, the Company's selective TIE2 immunokinase inhibitor, in combination with anti-tubulin therapy in patients with metastatic breast cancer. Deciphera is encouraged by the preliminary findings from the investigator-sponsored study and expects to initiate a company-sponsored Phase 1b study with rebastinib later in 2018.

First Quarter 2018 Financial Results

- **Cash Position**: As of March 31, 2018, Deciphera Pharmaceuticals reported cash and cash equivalents of $179.9 million compared to cash and cash equivalents of $196.8 million as of December 31, 2017. This decrease was primarily related to cash used in operating activities.
- **R&D Expenses**: Research and development expenses for the first quarter of 2018 were $16.9 million compared to $5.7 million for the same period in 2017. The increase was primarily due to an increase in spending on the DCC-2618 program of $7.3 million as a result of clinical trial costs related to the ongoing Phase 1 trial and the pivotal Phase 3 INVICTUS study in fourth-line GIST that began enrollment in January 2018. Clinical costs also increased as a result of start-up activities related to the pivotal Phase 3 study in second-line GIST, which is expected to be initiated in the second half of 2018. Manufacturing costs increased for DCC-2618 as a result of new process development to support anticipated greater drug requirements for commercialization as well as the manufacture of registration lots required to support a new drug application. Manufacturing costs for DCC-3014 increased $0.4 million in preparation for our current and planned clinical trials. In addition, personnel related and other costs increased an aggregate of $3.5 million as the result of an increase in costs associated with headcount, early-stage drug discovery programs and consulting fees. Personnel costs for each of the first quarters of 2018 and 2017 included non-cash share-based compensation expense of $1.0 million and $0.1 million, respectively.
- **G&A Expenses**: General and administrative expenses for the first quarter of 2018 were $5.0 million, compared to $2.1 million for the same period in 2017. The increase was primarily due to an increase in legal and professional fees as a result of various advisory fees related to ongoing operations as a public company as well as costs incurred for pre-commercialization activities. In addition, non-cash share-based compensation was $1.1 million and $0.3 million for each of the first quarters of 2018 and 2017, respectively.
- **Net Loss**: For the first quarter of 2018, Deciphera reported a net loss of $21.4 million, or $0.66 per share, compared with a net loss of $7.7 million, or $0.66 per share for the same period in 2017.

About Deciphera Pharmaceuticals

Deciphera Pharmaceuticals is a clinical-stage biopharmaceutical company focused on improving the lives of cancer patients by tackling key mechanisms of drug resistance that limit the rate and/or durability of response to existing cancer therapies. Our small molecule drug candidates are directed against an important family of enzymes called kinases, known to be directly involved in the growth and spread of many cancers. We use our deep understanding of kinase biology together with a proprietary chemistry

library to purposefully design compounds that maintain kinases in a “switched off” or inactivated conformation. These investigational therapies comprise tumor-targeted agents designed to address therapeutic resistance causing mutations and immuno-targeted agents designed to control the activation of immunokinases that suppress critical immune system regulators, such as macrophages. We have used our platform to develop a diverse pipeline of tumor-targeted and immuno-targeted drug candidates designed to improve outcomes for patients with cancer by improving the quality, rate and/or durability of their responses to treatment.

Availability of Other Information About Deciphera Pharmaceuticals

Investors and others should note that Deciphera Pharmaceuticals communicates with its investors and the public using its company website (www.deciphera.com), including but not limited to investor presentations and scientific presentations, Securities and Exchange Commission filings, press releases, public conference calls and webcasts. The information that Deciphera Pharmaceuticals posts on these channels and websites could be deemed to be material information. As a result, Deciphera Pharmaceuticals encourages investors, the media and others interested in Deciphera Pharmaceuticals to review the information that it posts on these channels, including Deciphera Pharmaceuticals’ investor relations website, on a regular basis. This list of channels may be updated from time to time on Deciphera Pharmaceuticals’ investor relations website and may include other social media channels than the ones described above. The contents of Deciphera Pharmaceuticals’ website or these channels, or any other website that may be accessed from its website or these channels, shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding the potential for DCC-2618 to treat GIST; statements regarding the potential benefits to patients of DCC-2618; statements regarding plans and timelines for the clinical development of DCC-2618; and Deciphera Pharmaceuticals’ strategy, business plans and focus. The words “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “target” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management’s current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks and uncertainties related to the delay of any current or planned clinical trials or the development of Deciphera Pharmaceuticals’ drug candidates, including DCC-2618; Deciphera Pharmaceuticals‘ advancement of multiple early-stage efforts; Deciphera Pharmaceuticals’ ability to successfully demonstrate the efficacy and safety of its drug candidates; the preclinical and clinical results for Deciphera Pharmaceuticals’ drug candidates, which may not support further development of such drug candidates; and actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials. These and other risks and uncertainties are described in greater detail in the section entitled “Risk Factors” in Deciphera Pharmaceuticals’ most recent quarterly report on Form 10-Q, and other filings that Deciphera Pharmaceuticals may make with the SEC in the future. Any forward-looking statements contained in this press release represent Deciphera Pharmaceuticals’ views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Deciphera Pharmaceuticals explicitly disclaims any obligation to update any forward-looking statements.

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CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	March 31, 2018	December 31, 2017
Assets		
Cash and cash equivalents	$179,873	$ 196,754
Prepaid expenses and other current assets	1,241	1,428
Property and equipment, net	952	838
Other assets	75	75
Total assets	$182,141	$ 199,095
Liabilities and Stockholders' Equity		
Accounts payable, accrued expenses and other liabilities	$ 16,116	$ 13,641
Debt obligations	1,435	1,481
Total liabilities	17,551	15,122
Total stockholders' equity	164,590	183,973
Total liabilities and stockholders' equity	$182,141	$ 199,095

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CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended March 31,	
	2018	2017
Revenue	$ —	$ —
Operating expenses:		
Research and development	16,925	5,659
General and administrative	5,026	2,067
Total operating expenses	21,951	7,726
Loss from operations	(21,951)	(7,726)
Other income (expense):		
Interest expense	(22)	(25)
Interest and other income, net	543	42
Total other income (expense), net	521	17
Net loss and comprehensive loss	$ (21,430)	$ (7,709)
Net loss per share—basic and diluted	$ (0.66)	$ (0.66)
Weighted average common shares outstanding—basic and diluted	32,594,074	11,626,287

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