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): December 16, 2019

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)**

200 Smith Street **Waltham, MA**	**02451**
(Address of registrant's principal executive office)	**(Zip code)**

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

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))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, $0.01 Par Value	**DCPH**	**The Nasdaq Global Select Market**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule12b-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 7.01. Regulation FD Disclosure.

On December 16, 2019, Deciphera Pharmaceuticals, Inc., or the Company, issued a press release announcing submission of a New Drug Application to the U.S. FDA for ripretinib in patients with advanced gastrointestinal stromal tumors.

A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form8-K.

On December 16, 2019, the Company also updated its corporate presentation which will be posted on the Investors portion of the Company's website (www.deciphera.com) under "Events and Presentations" and used for future presentations.

The furnishing of the attached press release is not an admission as to the materiality of any information therein. The information contained in the press release is summary information that is intended to be considered in the context of more complete information included in the Company's filings with the U.S. Securities and Exchange Commission, or the SEC, and other public announcements that the Company has made and may make from time to time by press release or otherwise. The Company undertakes no duty or obligation to update or revise the information contained in this report, although it may do so from time to time as its management believes is appropriate. Any such updating may be made through the filing of other reports or documents with the SEC, through press releases or through other public disclosures. For important information about forward looking statements, see the "Cautionary Note Regarding Forward-Looking Statements" section of the press release in Exhibit 99.1 attached hereto.

The information in this Item 7.01 of this Current Report onForm 8-K and Exhibit 99.1 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section or Sections 11 and 12(a)(2) of the Securities Act of 1933, as amended. The information contained in this Item 7.01 and in the press release attached as Exhibit 99.1 to this Current Report shall not be incorporated by reference into any filing with the SEC made by the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing, except as expressly set forth by specific reference in such filing.

Item 8.01 Other Events

On December 16, 2019, the Company announced the submission of a New Drug Application, or NDA, to the U.S. Food and Drug Administration (FDA) for ripretinib, the Company's investigational broad-spectrum KIT and PDGFRα inhibitor, for the treatment of patients with advanced gastrointestinal stromal tumors (GIST) who have received prior treatment with imatinib, sunitinib and regorafenib. The NDA is being reviewed by the FDA under its Oncology Center of Excellence Real-Time Oncology Review, or RTOR, pilot program. The pilot program aims to explore a more efficient review process to ensure that safe and effective treatments are available to patients as early as possible, while maintaining and improving review quality.

This Report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding our expectations regarding our goal of bringing ripretinib to patients with advanced GIST, the potential for ripretinib to serve as an important new treatment option for people with advanced GIST, working with the FDA through its review of our NDA application via the FDA's Real-Time Oncology Review pilot program and the possible benefits of that pilot program and breakthrough therapy designation, preparing for the potential launch of ripretinib in the United States, if approved, our readiness for commercial launch, and the estimated incidence and prevalence of GIST and related patient populations. 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 studies or the development of our product candidates, including ripretinib, our ability to successfully demonstrate the efficacy and safety of our product candidates including in later-stage studies, the preclinical and clinical results for our product candidates, which may not support further development of such product candidates, the possibility that results experienced in early, preliminary, top-line or initial data may not be indicative of the results experienced in final data, our ability to work with the FDA under its RTOR pilot program and timely respond to information requests or requirements in connection with our recently-filed NDA for ripretinib in advanced GIST, that acceptance into the RTOR pilot program does not guarantee or influence approvability of our NDA for ripretinib in advanced GIST, which is subject to the standard benefit-risk evaluation by FDA, and that we may not derive any benefit from inclusion in the RTOR pilot program, including, but not limited to, a more efficient review process compared to investigational drugs evaluated without this pilot program or under standard FDA procedures, the fact that the RTOR program is a pilot program being tested by FDA, is not a formal regulatory pathway with regulatory process, regulations or procedures, and may be suspended or halted at any time, including, without limitation, because FDA decides not to continue the pilot, or because FDA determines that our application no longer meets its criteria for inclusion in the RTOR pilot program, the fact that receipt of a breakthrough therapy designation for a product candidate, such as ripretinib, may not result in us receiving any of the benefits of such

designation such as a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures, the fact such designation does not assure ultimate approval by FDA and is subject to the risk FDA may later decide that the products no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened, our ability to manage and our reliance on third parties such as our third party drug substance and drug product contract manufacturers, actions of regulatory agencies, any or all of which may affect the initiation, timing and progress of clinical studies and the timing of and our ability to obtain regulatory approval, if at all, and make our investigational drugs, including ripretinib, available to patients, and other risks identified in our SEC filings, including our Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, and subsequent filings with the SEC. We caution you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. We disclaim any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements. Any forward-looking statements contained in this press release represent our views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. We explicitly disclaim any obligation to update any forward-looking statements.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release issued by Deciphera Pharmaceuticals, Inc. on December 16, 2019, 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: December 16, 2019

DECIPHERA PH**ARMACEUTICALS, INC**.

By: /s/ Steven L. Hoerter
Steven L. Hoerter
President and Chief Executive Officer

Exhibit 99.1

Deciphera Pharmaceuticals Announces Submission of New Drug Application to U.S. FDA for Ripretinib in Patients with Advanced Gastrointestinal Stromal Tumors

- Application is Being Reviewed Under FDA's Real-Time Oncology Review (RTOR) Pilot Program -

- Positive Results from Company's INVICTUS Pivotal Phase 3 Clinical Study of Ripretinib in Patients with Advanced Gastrointestinal Stromal Tumors (GIST) Form Basis of Submission -

Waltham, MA — December 16, 2019 – Deciphera Pharmaceuticals, Inc. (NASDAQ:DCPH) today announced the submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for ripretinib, the Company's investigational broad-spectrum KIT and PDGFRα inhibitor, for the treatment of patients with advanced GIST who have received prior treatment with imatinib, sunitinib and regorafenib.

"The NDA submission for ripretinib marks an exciting milestone as we work towards delivering a potential new treatment option for people with advanced GIST," said Steve Hoerter, President and Chief Executive Officer of Deciphera. "We look forward to working with the FDA through their review of our application, and we remain focused on preparing for the potential launch of ripretinib in the United States, if approved."

The NDA is being reviewed by the FDA under the Oncology Center of Excellence Real-Time Oncology Review, or RTOR, pilot program. The pilot program aims to explore a more efficient review process to ensure that safe and effective treatments are available to patients as early as possible, while maintaining and improving review quality. Additional information about RTOR can be found at: https://www.fda.gov/about-fda/oncology-center-excellence/real-time-oncology-review-pilot-program.

In October 2019, FDA granted Breakthrough Therapy Designation (BTD) for ripretinib for the treatment of patients with advanced GIST who have received prior treatment with imatinib, sunitinib and regorafenib. BTD is designed to expedite the development and review of drugs that are intended to treat a serious condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy.

The NDA submission is supported by positive data from the Company's INVICTUS pivotal Phase 3 study of ripretinib in advanced GIST. INVICTUS is a randomized (2:1), double-blind, placebo-controlled, international, multicenter study designed to evaluate the efficacy and safety of ripretinib compared to placebo in 129 patients with advanced GIST whose previous therapies have included at least imatinib, sunitinib, and regorafenib. As previously reported, the study achieved the primary endpoint of improved progression free survival compared to placebo in patients with fourth-line and fourth-line plus GIST, as determined by blinded independent central radiologic review using modified Response Evaluation Criteria in Solid Tumors (RECIST) version 1.1.

About Gastrointestinal Stromal Tumor

Gastrointestinal stromal tumor (GIST) is a cancer affecting the digestive tract or nearby structures within the abdomen, most often presenting in the stomach or small intestine. GIST is the most common sarcoma of the gastrointestinal tract, with approximately 4,000 to 6,000 new GIST cases each year in the United States and a similar incidence rate in European and other countries. Most cases of GIST are driven by a spectrum of mutations. The most common primary mutations are in KIT kinase, representing approximately 75% to 80% of cases, and PDGFRα kinase, representing approximately 5% to 10% of cases. Current therapies are unable to inhibit the full spectrum of primary and secondary mutations, which drives resistance and disease progression. Estimates for 5-year survival range from 48% to 90%, depending on the stage of the disease at diagnosis.

About Ripretinib

Ripretinib is an investigational tyrosine kinase switch control inhibitor that was engineered to broadly inhibit KIT and PDGFRα mutated kinases by using a unique dual mechanism of action that regulates the kinase switch pocket and activation loop. Ripretinib is currently in clinical development for the treatment of KIT and/or PDGFRα-driven cancers, including gastrointestinal stromal tumors, or GIST, systemic mastocytosis, or SM, and other cancers. Ripretinib inhibits initiating and secondary KIT mutations in exons 9, 11, 13, 14, 17, and 18, involved in GIST, as well as the primary exon 17 D816V mutation involved in SM. Ripretinib also inhibits primary PDGFRα mutations in exons 12, 14 and 18, including the exon 18 D842V mutation, involved in a subset of GIST. Ripretinib has been granted Fast Track Designation and Breakthrough Therapy Designation by the U.S. FDA for the treatment of patients with advanced GIST who have received prior treatment with imatinib, sunitinib and regorafenib. Ripretinib has also been granted Orphan Drug Designation for the treatment of GIST by the U.S. FDA and European Medicines Agency (EMA). For more information about the Company's clinical trials with ripretinib, please visit www.clinicaltrials.gov.

Deciphera Pharmaceuticals has an exclusive license agreement with Zai Lab (Shanghai) Co., Ltd. for the development and commercialization of ripretinib in Greater China (Mainland China, Hong Kong, Macau and Taiwan). Deciphera Pharmaceuticals retains development and commercial rights for ripretinib in the rest of the world.

About Deciphera Pharmaceuticals

Deciphera Pharmaceuticals is a clinical-stage biopharmaceutical company focused on improving the lives of cancer patients by addressing key mechanisms of drug resistance that limit the rate and/or durability of response to existing cancer therapies. Our small molecule product 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, and agents designed to inhibit reprogramming of cancer cell metabolism. We have used our platform to develop a diverse pipeline of tumor-targeted, immuno-targeted, and metabolism-targeted product candidates designed to improve outcomes for patients with cancer by improving the quality, rate and/or durability of their responses to treatment.

Cautionary Note Regarding Forward-Looking Statements

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"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 studies or the development of our product candidates, including ripretinib, our ability to successfully demonstrate the efficacy and safety of our product candidates including in later-stage studies, the preclinical and clinical results for our product candidates, which may not support further development of such product candidates, the possibility that results experienced in early, preliminary, top-line or initial data may not be indicative of the results experienced in final data, our ability to work with the FDA under its RTOR pilot program and timely respond to information requests or requirements in connection with our recently-filed NDA for ripretinib in advanced GIST, that acceptance into the RTOR pilot program does not guarantee or influence approvability of our NDA for ripretinib in advanced GIST, which is subject to the standard benefit-risk evaluation by FDA, and that we may not derive any benefit from inclusion in the RTOR pilot program, including, but not limited to, a more efficient review process compared to investigational drugs evaluated without this pilot program or under standard FDA procedures, the fact that the RTOR program is a pilot program being tested by FDA, is not a formal regulatory pathway with regulatory process, regulations or procedures, and may be suspended or halted at any time, including, without limitation, because FDA decides not to continue the pilot, or because FDA determines that our application no longer meets its criteria for inclusion in the RTOR pilot program, the fact that receipt of a breakthrough therapy designation for a product candidate, such as ripretinib, may not result in us receiving any of the benefits of such designation such as a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures, the fact such designation does not assure ultimate approval by FDA and is subject to the risk FDA may later decide that the products no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened, our ability to manage and our reliance on third parties such as our third party drug substance and drug product contract manufacturers, actions of regulatory agencies, any or all of which may affect the initiation, timing and progress of clinical studies and the timing of and our ability to obtain regulatory approval, if at all, and make our investigational drugs available to patients, and other risks identified in our SEC filings, including our Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, and subsequent filings with the SEC. We caution you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. We disclaim any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements. Any forward-looking statements contained in this press release represent our views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. We explicitly disclaim any obligation to update any forward-looking statements.

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