CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common Stock, $0.01 par value per share	3,659,090 shares	$55.00	$201,249,950.00	$26,122.25

(1) Assumes exercise in full of the underwriter's option to purchase up to 477,272 additional shares of Common Stock.

(2) Calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended. This "Calculation of Registration Fee" table shall be deemed to update the "Calculation of Registration Fee" table in the registrant's Registration Statement on Form S-3ASR (File No. 333-236389) in accordance with Rule 456(b) and 457(r) under the Securities Act of 1933, as amended.

As Filed Pursuant to Rule 424(b)(5)
Registration No. 333-236389

Prospectus supplement
(To prospectus dated February 12, 2020)

3,181,818 shares

Common stock

We are offering 3,181,818 shares of our common stock.

Our common stock is listed on The Nasdaq Global Select Market under the symbol “DCPH.” On February 13, 2020, the last reported sale price of our common stock on The Nasdaq Global Select Market was $58.44 per share.

We are an “emerging growth company” under federal securities laws and are subject to reduced public company disclosure standards. See “Prospectus Supplement Summary—Implications of Being an Emerging Growth Company.”

Investing in our common stock involves a high degree of risk. Please read the information contained in and incorporated by reference under the heading “Risk Factors” beginning on page S-25 of this prospectus supplement and in the related sections noted in the accompanying prospectus, and in the documents incorporated by reference herein and therein.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

	Per share	Total
Public Offering Price	$ 55.00	$ 174,999,990.00
Underwriting Discounts and Commissions(1)	$ 3.30	$ 10,499,990.40
Proceeds to Deciphera Pharmaceuticals, Inc. (before expenses)	$ 51.70	$ 164,499,990.60

(1) See “Underwriting” for a description of compensation payable to the underwriters.

The underwriters expect to deliver the shares of common stock against payment on or about February 19, 2020. We have granted the underwriters an option for a period of 30 days to purchase 477,272 additional shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $12,074,997.00 and the total proceeds to us, before expenses, will be $189,174,953.00.

J.P. Morgan **Piper Sandler** **Jefferies**

Lead Manager:

Guggenheim Securities

Co-Manager:

SunTrust Robinson Humphrey

The date of this prospectus supplement is February 13, 2020.

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Prospectus supplement

Prospectus

About this prospectus supplement

This prospectus is part of an automatic shelf registration statement that we have filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one of more offerings.

This document contains two parts. The first part is this prospectus supplement, which describes the specific terms of this common stock offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein. The second part, the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference therein filed prior to the date of this prospectus supplement, you should rely on the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Neither we nor the underwriters have authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus supplement, the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The information contained in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein or therein is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our common stock. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you in the sections entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this prospectus supplement and in the accompanying prospectus.

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation of an offer in such jurisdiction. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions

relating to, the offering of the common stock and the distribution of this prospectus supplement and the accompanying prospectus outside the United States.

Unless otherwise stated, all references in this prospectus supplement and the accompanying prospectus to “we,” “us,” “our,” “Deciphera,” “the Company” and similar designations refer, collectively, to Deciphera Pharmaceuticals, Inc., a Delaware corporation, and, where appropriate, its consolidated subsidiaries.

This prospectus supplement and the accompanying prospectus contain references to our trademarks and to trademarks belonging to other entities. Third-party product and company names mentioned herein may be the trademarks of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus supplement and the accompanying prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

No action is being taken in any jurisdiction outside the United States to permit a public offering of the securities or possession or distribution of this prospectus supplement or the accompanying prospectus in that jurisdiction. Persons who come into possession of this prospectus supplement or the accompanying prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus supplement or the accompanying prospectus applicable to that jurisdiction.

Cautionary note regarding forward-looking statements

This prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein include “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical facts, included in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “target,” “potential,” “will,” “would,” “could,” “should,” “continue” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about:

- the success, cost and timing of our product development activities and clinical trials, including the timing of our ongoing Phase 3 trial and results therefrom;
- our ability to obtain and maintain regulatory approval for ripretinib (DCC-2618) or any of our other current or future drug candidates, and any related restrictions, limitations and/or warnings in the label of an approved drug candidate;
- our expectations regarding the size of target patient populations for our drug candidates, if approved for commercial use, and any additional drug candidates we may develop;
- our ability to obtain funding for our operations;
- our ability to manufacture or obtain sufficient quantities of our drug candidates, including, without limitation, ripretinib, on a timely basis, to support our planned clinical trials and, if approved, commercialization;
- our commercial preparedness efforts and our ability to be ready for commercial launch upon approval of a drug candidate, including ripretinib;
- the commercialization of our drug candidates, if approved;
- our plans to research, develop and commercialize our drug candidates, including the timing of our ongoing Phase 3 trial and the timing of investigational new drug, or IND, applications, including, without limitation, the success of IND-enabling studies for, and the expected timing of, an IND application for our DCC-3116 program;
- the performance and experience of our licensee, Zai Lab (Shanghai) Co., Ltd., or Zai, to successfully develop and, if approved, commercialize ripretinib in Greater China under the terms and conditions of our license agreement;
- our ability to attract additional licensees and/or collaborators with development, regulatory and commercialization expertise;
- our expectations regarding our ability to obtain, maintain, enforce and defend our intellectual property protection for our drug candidates;
- future agreements with third parties in connection with the commercialization of ripretinib or any of our other current or future drug candidates;
- the size and growth potential of the markets for our drug candidates and our ability to serve those markets;

- the rate and degree of market acceptance of our drug candidates as well as the reimbursement coverage for our drug candidates, and the extent to which patient assistance programs are utilized;
- regulatory and legal developments in the United States and foreign countries;
- the performance and experience of our third-party suppliers and manufacturers;
- the success and timing of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- the benefits of U.S. Food and Drug Administration, or FDA, designations such as Fast Track and Breakthrough Therapy or Priority Review, and review of our New Drug Application, or NDA, under the FDA's Real-Time Oncology Review and Project Orbis pilot programs;
- the timing or likelihood of approval of our NDA submission to the FDA, our New Drug Submission with Health Canada, or our market authorisation application with the Therapeutic Goods Administration in Australia, for ripretinib and potential regulatory approval for and commercial launch of ripretinib in these jurisdictions;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act; and
- our use of the proceeds from our initial public offering and our follow-on public offerings and any other financing transaction we may undertake.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus supplement, the accompanying prospectus, and the information incorporated by reference herein and therein, particularly in the "Risk Factors" section of this prospectus supplement and of our Annual Report on Form 10-K for the year ended December 31, 2018 and our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2019, each of which is incorporated by reference herein, that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments that we may make.

You should read this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein completely and with the understanding that our actual future results may be materially different from what we expect. Any forward-looking statement speaks only as of the date of this prospectus supplement. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Prospectus supplement summary

This summary highlights selected information contained elsewhere in this prospectus supplement and the accompanying prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, carefully, especially the risks of investing in our common stock discussed under "Risk Factors" beginning on page S-9 of this prospectus supplement and under similar sections of the accompanying prospectus and other periodic reports incorporated herein and therein by reference, along with our consolidated financial statements and notes to those consolidated financial statements, before making an investment decision.

Deciphera Pharmaceuticals, Inc.

Overview

We are a clinical-stage biopharmaceutical company developing new drugs to improve the lives of cancer patients by addressing key mechanisms of drug resistance that limit the rate and durability of response of many cancer therapies. Our targeted, small molecule drug candidates, designed using our proprietary kinase switch control inhibitor platform, inhibit the activation of kinases, an important family of enzymes, that when mutated or over expressed, are known to be directly involved in the growth and spread of many cancers. We have built a diverse pipeline of orally administered drug candidates that includes three clinical-stage, one preclinical-stage, and one research-stage program. We wholly own all of our drug candidates with the exception of a development and commercialization out-license agreement for our lead drug candidate, ripretinib, in the Greater China region.

In December 2019, we submitted a new drug application, or NDA, to the U.S. Food and Drug Administration, or FDA, for ripretinib for the treatment of patients with advanced gastrointestinal stromal tumors, or GIST, who have received prior treatment with imatinib, sunitinib, and regorafenib. Our NDA is based on positive results from our first Phase 3 study, INVICTUS, in fourth-line and fourth-line plus GIST patients, for whom there are currently no approved therapies in the U.S. other than avapritinib, which is approved for GIST patients with PDGRFa exon 18 mutations only (estimated to be approximately six percent of all patients with newly-diagnosed GIST). In August 2019, we announced top-line results from INVICTUS, including that the study achieved its primary endpoint of improved progression free survival, or PFS, compared to placebo as determined by blinded independent radiologic review using modified Response Evaluation Criteria in Solid Tumors, or RECIST, version 1.1. In February 2020, the FDA accepted our NDA for ripretinib for the treatment of patients with advanced GIST, granted priority review and set an action date of August 13, 2020 under the Prescription Drug User Fee Act, or PDUFA.

The NDA is being reviewed under the FDA's Oncology Center of Excellence, or OCE, Real-Time Oncology Review pilot program, or RTOR, which, according to the FDA, 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. In October 2019, the FDA granted Breakthrough Therapy Designation, or 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 on a clinically significant endpoint(s). In December 2019, we filed a New Drug Submission, or NDS, with Health Canada, and a market authorisation application, or AUS MAA, with the Therapeutic Goods Administration, or TGA, in Australia, for ripretinib in advanced GIST, under the

FDA's Project Orbis pilot program, or Project Orbis. Project Orbis is an initiative of the OCE and, according to the FDA, provides a framework for concurrent submission and review of oncology products among international partners. Both the NDS and the AUS MAA have received priority review. Acceptance into the RTOR and Orbis pilot programs does not guarantee or influence approvability of our NDA, NDS, and AUS MAA for ripretinib in advanced GIST, which are subject to the standard benefit-risk evaluation by the FDA, and the review standards of Health Canada and TGA, and we may not derive any benefit from inclusion in these pilot programs, including, but not limited to, a more efficient review process. These pilot programs are not formal regulatory pathways and may be changed, suspended, or halted at any time.

We are actively engaged in commercial preparations to support the potential U.S. launch of ripretinib for the treatment of patients with advanced GIST who have received prior treatment with imatinib, sunitinib, and regorafenib, if approved. We expect to file a marketing authorisation application, or MAA, with the European Medicines Agency, or EMA, in the European Union, or EU, for ripretinib in advanced GIST in the second half of 2020, and we are exploring whether to partner, or build our own, European go-to-market capabilities, to support a potential EU approval. In June 2019, we entered into a License Agreement, or the Zai License Agreement, with an affiliate of Zai Lab (Shanghai) Co., Ltd., or Zai, pursuant to which we granted Zai exclusive rights to develop and commercialize ripretinib, including certain follow-on compounds, or the Licensed Products, in Mainland China, Hong Kong, Macau, and Taiwan, collectively Greater China.

In addition, we are studying ripretinib in our global pivotal Phase 3 study, INTRIGUE, in second-line GIST patients, comparing ripretinib to sunitinib. As of January 6, 2020, we had 106 sites open for enrollment in INTRIGUE in 18 countries. We expect to complete enrollment in INTRIGUE in the second half of 2020.

We also have an ongoing Phase 1 trial studying ripretinib in patients with different stages of GIST following treatment with at least imatinib, as well as in patients with systemic mastocytosis other than indolent systemic mastocytosis, or SM, and other solid tumors driven by KIT or PDGFRa including gliomas, melanoma, non-small cell lung cancer, or NSCLC, germ cell cancer, penile cancer, and soft tissue sarcomas, as well as a cohort for GIST and other solid tumors with renal impairment. We expect to report data from one or more of these expansion cohorts in the second half of 2020.

Beyond ripretinib, we are developing two other clinical-stage drug candidates, DCC-3014 and rebastinib, which target the macrophage tumor microenvironment.

DCC-3014 is an investigational, orally administered, potent, and highly selective inhibitor of CSF1R, a kinase that controls the survival and function of certain immunosuppressive tumor associated macrophages, or TAMs. We are currently studying DCC-3014 in a Phase 1 dose escalation study that includes patients with advanced malignancies as well as patients with a type of tenosynovial giant cell tumors, or TGCT, known as diffuse-type TGCT. The dose escalation Phase 1 study is designed to determine a Phase 2 dose for an expansion study. During 2019, we announced positive, preliminary data from the ongoing dose escalation Phase 1 study with DCC-3014 in patients with advanced malignancies and preliminary data from three initial patients diagnosed with TGCT. To explore the potential of DCC-3014 in this target population, we intend to continue to enroll TGCT patients in the dose escalation study, and, in the second half of 2020, provide a data update on TGCT patients. Subject to favorable results from the dose escalation study, in the second half of 2020 we intend to determine a Phase 2 dose for, and initiate an expansion study with DCC-3014, including in patients with TGCT. We will also continue to evaluate the potential to study DCC-3014 in advanced malignancies in combination with immuno-oncology, or I/O, therapies.

Rebastinib is an investigational, orally administered, potent, and selective inhibitor of TIE2 kinase, which plays an important role in regulating tumor angiogenesis, invasiveness, metastasis, and immunotolerance. We are

currently studying rebastinib in two Phase 1b/2 studies in combination with chemotherapy. In October 2018, we initiated an open-label, multicenter, Phase 1b/2 study of rebastinib in combination with paclitaxel to assess safety, tolerability, pharmacokinetics, or PK, and efficacy in patients with advanced or metastatic solid tumors. Part 2 of this study is currently ongoing and we expect to present Phase 1b/2 data from this study in the second half of 2020. In January 2019, we initiated an open-label, multicenter, Phase 1b/2 study of rebastinib in combination with carboplatin in patients with advanced or metastatic solid tumors. In January 2020, we selected a Phase 2 dose for, and activated, Part 2 of this Phase 1b/2 study in combination with carboplatin and we expect to present data from this study in the second half of 2020.

In addition to our clinical-stage programs, we are conducting preclinical investigational new drug, or IND, enabling studies, with DCC-3116, a small molecule ULK kinase inhibitor discovered using our novel switch control inhibitor platform. DCC-3116 is designed to inhibit autophagy, a key tumor survival mechanism in cancer cells, by inhibiting the ULK kinase, which has been shown to be the initiating factor that activates autophagy. Subject to favorable IND-enabling studies and FDA acceptance of our IND, currently expected to be filed in second half of 2020, we intend to develop DCC-3116 for the potential treatment of RAS mutant cancers in combination with inhibitors of downstream RAS effector targets including RAF, MEK, or ERK inhibitors as well as with direct inhibitors of mutant RAS.

We believe our proprietary kinase switch control inhibitor platform, supported by our experienced management team, enables us to develop advanced, differentiated, kinase inhibitors that may provide significant benefits to cancer patients. We continue to work on potential new drug candidates for undisclosed targets.

Ripretinib: A Broad-spectrum KIT and PDGFRa Inhibitor

We are developing our lead drug candidate ripretinib, an orally administered kinase switch control inhibitor, for the treatment of GIST, SM, and other solid tumors driven by KIT or PDGFRa where significant unmet medical need exists despite currently available therapies. While approved kinase inhibitors control certain initiating and drug resistance-causing mutations in KIT and PDGFRa, the kinases that drive disease progression in most GIST patients, these approved drugs fail to inhibit all known mutations. We designed ripretinib to improve the treatment of GIST patients by inhibiting the full spectrum of the known mutations in KIT and PDGFRa.

GISTs are the most common sarcoma of the gastrointestinal tract and present most often in the stomach or small intestine. The typical patient is over 40 years old. According to the American Cancer Society, in 2019 approximately 4,000 to 6,000 patients were newly diagnosed with GIST in the United States. Disease progression in advanced GIST is often due to secondary mutations in KIT or PDGFRa that cause resistance to first-line treatment. We estimate that annual new treatment-eligible second-line GIST patients in the U.S. are approximately 2,000 with an estimated annual prevalence of treated GIST patients in the second-line of approximately 2,600. We estimate that approximately 70 to 80% of eligible patients from the second-line will be eligible for third-line treatment, and approximately 70 to 80% of eligible patients from the third-line will be eligible for fourth-line treatment. Eligible patients for third- and fourth-line treatment exclude the estimated proportion of patients that die, discontinue treatment, or enter a clinical trial and, therefore, are not eligible for treatment; for later lines of therapy, we expect a similar drop-off rate. These estimates, which are based on our recent analyses of U.S. claims data, are inherently uncertain.

INVICTUS: Completed Phase 3 Study in Fourth-Line and Fourth-Line Plus GIST

The INVICTUS Phase 3 study was a randomized, double-blind, placebo-controlled, global, multicenter trial to evaluate the safety, tolerability, and efficacy of ripretinib compared to placebo in patients with advanced GIST

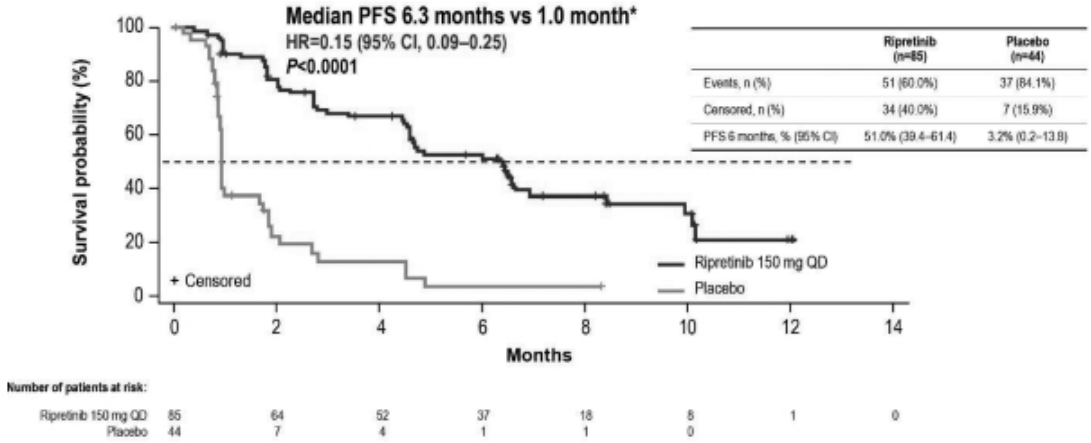
whose previous therapies have included at least imatinib, sunitinib, and regorafenib. We enrolled 129 patients who had a confirmed diagnosis of GIST and had previously received at least three different kinase inhibitors including imatinib, sunitinib, and regorafenib. Patients were treated with ripretinib or placebo, in accordance with their randomization, until they developed disease progression, experienced unacceptable toxicity, or withdrew consent. Placebo patients had the opportunity to cross over to ripretinib treatment upon disease progression with placebo. Patients on ripretinib had the opportunity to remain on their current dose or escalate to 150 mg twice daily, or BID, upon disease progression.

Patients were randomized 2:1 to either 150 mg of ripretinib or placebo once daily, or QD, in repeated 28-day cycles with best supportive care, or BSC. Patients were evaluated for PFS based upon independent radiologic review of CT scans, as assessed by modified RECIST version 1.1. Tumor response assessments per modified RECIST were conducted every cycle for the first three cycles and then every two cycles thereafter beginning with the fourth cycle. The primary efficacy endpoint was PFS as determined by independent radiologic review using modified RECIST. Secondary endpoints as determined by independent radiologic review using modified RECIST included objective response rate, or ORR, overall survival, or OS, and time to tumor progression.

In 2019, we announced top-line data from INVICTUS, including that the study achieved its primary endpoint of improved PFS compared to placebo.

In the INVICTUS study, ripretinib demonstrated a median PFS of 6.3 months (27.6 weeks) compared to 1.0 month (4.1 weeks) in the placebo arm and significantly reduced the risk of disease progression or death by 85% (Hazard Ratio (HR) of 0.15, 95% Confidence Interval (0.09, 0.25), p-value <0.0001) compared to placebo. This PFS benefit was consistent across all assessed patient subgroups. The following graph shows the estimated PFS probability at each time point for the ripretinib and placebo arms in INVICTUS:

INVICTUS: Estimated PFS Probability for Ripretinib and Placebo Arms

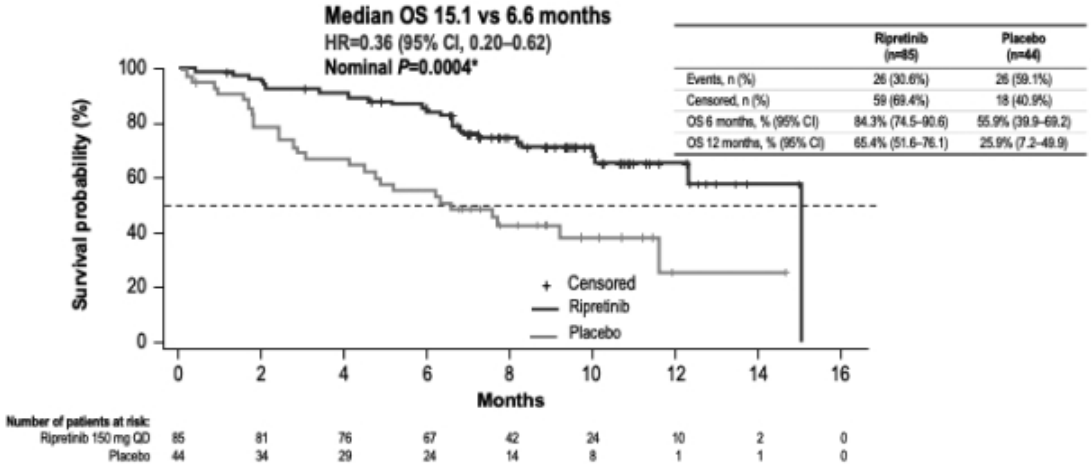


* Double-blind period.

For the key secondary endpoint of ORR, as determined by blinded independent radiologic review using modified RECIST, ripretinib demonstrated an ORR of 9.4% compared with 0% for placebo (p-value=0.0504), which was not statistically significant. As of the cutoff date of May 31, 2019, the median duration of response had not been reached with seven of the eight patients still responding to treatment. All responders had partial responses.

Ripretinib also showed a clinically meaningful improvement over placebo in terms of the secondary endpoint of OS (median OS 15.1 months with ripretinib compared to 6.6 months with placebo, HR = 0.36, 95% Confidence Interval (0.20, 0.62), nominal p-value=0.0004). According to the pre-specified hierarchical testing procedure of the endpoints, the hypothesis testing of OS cannot be formally conducted unless the test of ORR is statistically significant. Since statistical significance was not achieved for ORR, the hypothesis testing of OS was not formally performed. The OS data for the placebo arm include patients taking placebo who, following progression, were crossed-over to ripretinib treatment. The following graph shows the estimated OS probability at each time point for the ripretinib and placebo arms in INVICTUS:

INVICTUS: Estimated OS Probability for Ripretinib and Placebo Arms†



	Ripretinib (n=85)	Placebo (n=44)
Events, n (%)	26 (30.6%)	26 (59.1%)
Censored, n (%)	59 (69.4%)	18 (40.9%)
OS 6 months, % (95% CI)	84.3% (74.5–90.6)	55.9% (39.9–69.2)
OS 12 months, % (95% CI)	65.4% (51.6–76.1)	25.9% (7.2–49.9)

* Due to hierarchal testing procedures of the endpoints, the OS endpoint could not be formally tested because the ORR was not statistically significant.

† **Data include all time periods, including dose escalations. Placebo arm includes patients taking placebo who, following progression, were crossed-over to ripretinib treatment.**

Ripretinib was generally well tolerated and the adverse events reported in the INVICTUS study were consistent with data from previously presented Phase 1 study results. Grade 3 or 4 treatment-emergent adverse events, or TEAEs, occurred in 42 patients (49%) on the ripretinib arm compared to 19 patients (44%) on the placebo arm. Grade 3 or 4 TEAEs in greater than 5% of patients in the ripretinib arm were anemia (9%; n=8), abdominal pain (7%; n=6), and hypertension (7%; n=6). Grade 3 or 4 TEAEs in greater than 5% of patients in the placebo arm were anemia (14%; n=6).

The below table lists all TEAEs (and corresponding grade 3 and 4 TEAEs) in greater than 10% of patients in the ripretinib arm compared to the placebo arm in INVICTUS.

INVICTUS: TEAEs in >10% of Patients (and Corresponding Grade 3 and 4 TEAEs)

Treatment emergent adverse event	Ripretinib any grade (n=85)	Ripretinib grade 3 and 4 (n=85)[1]	Placebo any grade (n=43)[2]	Placebo grade 3 and 4 (n=43)[1,2]
Any TEAE or grade 3/4 TEAE[3]	**84 (98.8%)**	**42 (49.4%)**	**42 (97.7%)**	**19 (44.2%)**
Alopecia	44 (51.8%)	0	2 (4.7%)	0
Fatigue	36 (42.4%)	3 (3.5%)	10 (23.3%)	1 (2.3%)
Nausea	33 (38.8%)	3 (3.5%)	5 (11.6%)	0
Abdominal pain	31 (36.5%)	6 (7.1%)	13 (30.2%)	2 (4.7%)
Constipation	29 (34.1%)	1 (1.2%)	8 (18.6%)	0
Myalgia	27 (31.8%)	1 (1.2%)	5 (11.6%)	0
Diarrhea	24 (28.2%)	1 (1.2%)	6 (14%)	1 (2.3%)
Decreased appetite	23 (27.1%)	1 (1.2%)	9 (20.9%)	1 (2.3%)
Palmar-plantar erythrodysesthesia syndrome	18 (21.2%)	0	0	0
Vomiting	18 (21.2%)	3 (3.5%)	3 (7%)	0
Headache	16 (18.8%)	0	2 (4.7%)	0
Weight decreased	16 (18.8%)	0	5 (11.6%)	0
Arthralgia	15 (17.6%)	0	2 (4.7%)	0
Blood bilirubin increased	14 (16.5%)	1 (1.2%)	0	0
Edema peripheral	14 (16.5%)	1 (1.2%)	3 (7%)	0
Muscle spasms	13 (15.3%)	0	2 (4.7%)	0
Anemia	12 (14.1%)	8 (9.4%)	8 (18.6%)	6 (14%)
Hypertension	12 (14.1%)	6 (7.1%)	2 (4.7%)	0
Asthenia	11 (12.9%)	1 (1.2%)	6 (14%)	2 (4.7%)
Dry skin	11 (12.9%)	0	3 (7%)	0
Dyspnea	11 (12.9%)	0	0	0
Hypophosphatemia	9 (10.6%)	4 (4.7%)	0	0
Lipase increased	9 (10.6%)	4 (4.7%)	0	0
Pruritus	9 (10.6%)	0	2 (4.7%)	0
Stomatitis	9 (10.6%)	0	0	0

1 Corresponding grade 3/4 TEAEs to TEAEs in >10% of patients receiving ripretinib.

2 44 patients were randomized to placebo, but 1 did not receive treatment.

3 Regardless of causality.

TEAEs leading to dose reduction occurred in 7% of patients on the ripretinib arm compared to 2% on the placebo arm. TEAEs leading to dose interruption occurred in 24% of patients on the ripretinib arm compared to 21% on the placebo arm. TEAEs leading to study treatment discontinuation occurred in 8% of patients on the ripretinib arm compared to 12% of patients on the placebo arm. TEAEs leading to death occurred in 6% of patients on the ripretinib arm compared to 23% on the placebo arm.

INTRIGUE: Ongoing Phase 3 Study in Second-Line GIST

In December 2018, we initiated a pivotal Phase 3 study, INTRIGUE, to evaluate the efficacy and tolerability of ripretinib compared to sunitinib in second-line GIST patients. We believe that the results from INTRIGUE, if positive, would support an NDA for approval in second-line GIST patients in the United States, and similar applications in Europe and other major markets.

The INTRIGUE Phase 3 study is an interventional, randomized, global, multicenter, open-label study to evaluate the safety, tolerability and efficacy of ripretinib compared to sunitinib in approximately 358 patients with GIST previously treated with imatinib. Patients will be randomized 1:1 to either 150 mg of ripretinib QD or 50 mg of sunitinib QD for four weeks followed by two weeks without sunitinib. The primary efficacy endpoint is PFS as determined by independent radiologic review using modified RECIST. Secondary endpoints as determined by independent radiologic review using modified RECIST include ORR and OS. As of January 6, 2020, we had 106 sites open for enrollment in INTRIGUE. We expect to complete enrollment in INTRIGUE in the second half of 2020. As an event-driven study, the analysis of the primary endpoint for INTRIGUE will occur once a pre-specified number of events, defined as death or disease progression events based on independent radiologic review using modified RECIST, has occurred. We are planning to increase the total number of patients in the study to strengthen the ability to achieve the pre-specified number of events due to a recent trend of a higher than expected number of censored patients. Patient discontinuations that result in a patient being censored instead of counting toward the required number of total events can include discontinuations after local progression that has not been confirmed centrally, withdrawal of consent and a randomized patient that does not ever receive treatment. An increase in the total number of patients would require a protocol amendment and the currently anticipated increase is not expected to change the total number of required events, the statistical powering of the study, or our current guidance of achieving full enrollment in the second half of 2020.

Ongoing Phase 1 Expansion Trial of Ripretinib in GIST and Other Solid Tumors

We have an ongoing Phase 1 trial studying ripretinib in patients with different stages of GIST following treatment with at least one systemic anticancer therapy, such as imatinib, as well as in patients with SM and other solid tumors driven by KIT or PDGFRa including gliomas, melanoma, NSCLC, germ cell cancer, penile cancer, and soft tissue sarcomas, as well as a cohort for GIST and other solid tumors with renal impairment. We completed the dose escalation stage of the Phase 1 trial, focused on evaluating the safety, tolerability, and maximum tolerated dose, or MTD, of ripretinib, and determined a Phase 2 dose. The primary objectives of the expansion stage of the Phase 1 trial are to further evaluate the safety and tolerability of ripretinib and to determine the antitumor activity of ripretinib in all diseases studied in the trial. The secondary objectives are to determine the PK profile of ripretinib and determine allele frequency of KIT and PDGFRa mutations in ctDNA and compare it with mutation allele frequency in GIST tumor tissue at baseline and in response to treatment of ripretinib. The safety endpoints of the expansion phase of the Phase 1 trial include dose reduction or discontinuation of study drug due to toxicity and adverse events. The endpoints for preliminary assessment of antitumor activity include ORR and disease control rate, or DCR, at 12 weeks. Other endpoints include PFS for all solid tumor patients.

The expansion stage may enroll up to 270 patients in 10 cohorts including three GIST cohorts, one for each of second/third-, fourth-, and fourth-line plus GIST, one for GIST or other solid tumor patients with renal impairment, one cohort for SM with other hematologic malignancies, and five cohorts for other KIT and PDGFRa-driven solid tumors, including another solid tumor cohort, and one for each of malignant gliomas, melanoma, NSCLC/germ cell/penile, and soft tissue sarcoma.

The starting dose for ripretinib in the expansion cohorts is the expansion dose of 150 mg QD that was determined during the dose escalation stage of the Phase 1 trial, except for the SM cohort, which is currently using 150 mg BID as the starting dose. Patients who have disease progression by specified indication response criteria in the expansion stage may escalate to the higher daily dose (150 mg BID) of ripretinib after completion of the second cycle. We expect to report data from one or more of these expansion cohorts in the second half of 2020.

AACR-NCI-EORTC Meeting 2019 Data Presentation on Phase 1 Study in GIST Patients at Starting Dose of 150 mg Daily and Additional Related Data

We presented updated preliminary results from our ongoing Phase 1 study of ripretinib in patients with second-line through fourth-line plus GIST at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, or the Triple Meeting 2019, in October 2019, and in related releases. These results included data from 142 GIST patients in the escalation and expansion phases of the study receiving 150 mg QD of ripretinib as the starting dose, which is the dose being administered in our INVICTUS and INTRIGUE registration-enabling studies, as of an August 10, 2019 data cutoff date. The table below includes local, investigator-assessed ORR by best response as determined by modified RECIST, median duration of response, median progression free survival, or mPFS, and mean treatment duration.

Line of therapy	**2nd line (n=31)**	**3rd line (n=28)**	**[3]4th line (n=83)**
ORR (confirmed responses only)(1)	19% (n=6)	14% (n=4)	7% (n=6)
Median Duration of Response	80 weeks	NE(2)	76 weeks
mPFS	46 weeks(4)	36 weeks(5)	24 weeks(6)
Mean Treatment Duration(3)	56 weeks	58 weeks	45 weeks

Ripretinib was generally well tolerated and the updated adverse events were consistent with previously presented Phase 1 data in patients with GIST. Grade 3 or 4 TEAEs in greater than 5% of patients were increase in lipase level (n=25; 18%), anemia (n=11; 8%), and abdominal pain (n=11; 8%). The most common TEAEs in greater than 10% of patients is shown in the table below.

Phase 1 Study: All Grade TEAEs, Regardless of Relatedness, in >10% of Patients with GIST Treated with Ripretinib 150 mg QD

Treatment emergent adverse events	Grade 1/2, n (%) (n=142)	Grade 3/4, n (%) (n=142)	All grades, n (%) (n=142)
Alopecia	86 (60.6%)	0	86 (60.6%)
Fatigue	74 (52.1%)	4 (2.8%)	78 (54.9%)
Myalgia	68 (47.9%)	0	68 (47.9%)
Nausea	64 (45.1%)	2 (1.4%)	66 (46.5%)
Palmar-plantar erythrodysesthesia syndrome	62 (43.7%)	1 (0.7%)	63 (44.4%)
Constipation	57 (40.1%)	0	57 (40.1%)
Decreased appetite	46 (32.4%)	2 (1.4%)	48 (33.8%)
Diarrhea	44 (31.0%)	3 (2.1%)	47 (33.1%)
Muscle spasms	42 (29.6%)	0	42 (29.6%)
Abdominal pain	28 (19.7%)	11 (7.7%)	39 (27.5%)
Lipase increased	14 (9.9%)	25 (17.6%)	39 (27.5%)
Weight decreased	39 (27.5%)	0	39 (27.5%)
Vomiting	36 (25.4%)	1 (0.7%)	37 (26.1%)
Headache	35 (24.6%)	1 (0.7%)	36 (25.4%)
Arthralgia	32 (22.5%)	0	32 (22.5%)
Hypertension	25 (17.6%)	7 (4.9%)	32 (22.5%)
Dry skin	31 (21.8%)	0	31 (21.8%)
Anemia	19 (13.4%)	11 (7.7%)	30 (21.1%)
Back pain	27 (19.0%)	2 (1.4%)	29 (20.4%)
Dyspnea	25 (17.6%)	3 (2.1%)	28 (19.7%)
Cough	25 (17.6%)	0	25 (17.6%)
Dizziness	25 (17.6%)	0	25 (17.6%)
Rash	23 (16.2%)	0	23 (16.2%)
Actinic keratosis	22 (15.5%)	0	22 (15.5%)
Hypophosphatemia	15 (10.6%)	7 (4.9%)	22 (15.5%)
Seborrheic keratosis	22 (15.5%)	0	22 (15.5%)
Hypokalemia	15 (10.6%)	4 (2.8%)	19 (13.4%)
Rash maculo-papular	19 (13.4%)	0	19 (13.4%)
Blood bilirubin increased	14 (9.9%)	4 (2.8%)	18 (12.7%)
Pain in extremity	17 (12.0%)	1 (0.7%)	18 (12.7%)
Insomnia	17 (12.0%)	0	17 (12.0%)
Pruritus	17 (12.0%)	0	17 (12.0%)
Blood creatine phosphokinase increased	13 (9.2%)	3 (2.1%)	16 (11.3%)
Melanocytic nevus	16 (11.3%)	0	16 (11.3%)
Skin papilloma	16 (11.3%)	0	16 (11.3%)
Stomatitis	16 (11.3%)	0	16 (11.3%)
Urinary tract infection	14 (9.9%)	2 (1.4%)	16 (11.3%)
Peripheral sensory neuropathy	15 (10.6%)	0	15 (10.6%)

The Phase 1 data described above are based on investigator assessment of tumor response in a single arm study with a limited number of patients and may not be predictive of, or consistent with, the results of later trials.

DCC-3014: A Potent and Highly Selective Inhibitor of CSF1R

DCC-3014 is an investigational, orally administered, potent, and highly selective inhibitor of CSF1R, also known as FMS. CSF1R is a kinase that controls the survival and function of TAMs. DCC-3014 was designed to selectively bind to the CSF1R switch pocket. It has greater than 100-fold selectivity for CSF1R over the closely related kinases FLT3, KIT, PDGFRa, PDGFRß, and VEGFR2 and has an even greater selectivity for CSF1R over approximately 300 other human kinases that we tested.

We are currently studying DCC-3014 in a Phase 1 dose escalation study that includes patients with advanced malignancies as well as patients with TGCT. The Phase 1 dose escalation study is designed to determine a Phase 2 dose for an expansion study. During 2019, we announced positive, preliminary data from the ongoing Phase 1 dose escalation study with DCC-3014 in patients with advanced malignancies and preliminary data from three initial patients diagnosed with TGCT. To explore the potential of DCC-3014 in this target population, we intend to continue to enroll TGCT patients in the dose escalation study, and, in the second half of 2020, provide a data update on TGCT patients. Subject to favorable results from the dose escalation study, in the second half of 2020 we intend to determine a Phase 2 dose for, and initiate an expansion study, including in patients with TGCT. We will also continue to evaluate the potential to study DCC-3014 in advanced malignancies in combination with I/O therapies.

Market Opportunity in Tenosynovial Giant Cell Tumor (TGCT)

TGCTs are a group of benign tumors that involve the synovium, bursae and/or tendon sheath. Although benign, these tumors can grow and cause damage to surrounding tissues and structures inducing pain, swelling, and limitation of movement of the joint. Surgery is the main treatment option; however, these tumors tend to recur. If untreated, or if the tumor continually recurs, damage and degeneration may occur in the affected joint and surrounding tissues, which may cause significant disability. A genetic mutation in certain cells within the tumor causes overproduction of CSF-1, the ligand for the CSF1R receptor, which attracts macrophages and certain other cells that become the bulk of these tumors and cause the associated inflammatory changes.

TGCTs are divided into types based on where they are and how quickly they grow. Localized TGCT grows slowly and starts in smaller joints like the fingers, toes, knee, wrist, and ankle. In 2017, annual incidence of new localized TGCT cases in the U.S. is estimated to be approximately 13,000. Diffuse TGCT grows quickly and most commonly affects the knee, as well as the hip, ankle, elbow, and shoulder. In 2017, annual incidence of new diffuse TGCT cases in the U.S. is estimated to be approximately 1,300. The current standard of care for TGCT is surgical resection, with high recurrence rates for diffuse-TGCT following complete resection.

CSF1R inhibition has demonstrated clinical benefit in diffuse TGCT patients and we believe that despite an approved treatment for diffuse TGCT patients in the U.S., there remains an unmet medical need for this population. In a randomized Phase 3 trial, pexidartinib, a CSF1R inhibitor approved by the FDA in August 2019 for the treatment of symptomatic TGCT, demonstrated the proportion of patients who achieved ORR was higher for pexidartinib, at 38%, versus placebo, at 0%, at week 25 by RECIST, version 1.1. The FDA approval includes a Risk Evaluation and Mitigation Strategy, or REMS, for pexidartinib, including intensive monitoring, due to off-target hepatotoxicity concerns.

Ongoing Phase 1 Dose Escalation Study and Proposed Phase 2 Expansion Study of DCC-3014, including in Patients with Diffuse-Type TGCT

The Phase 1 dose escalation study is a single arm study of DCC-3014 that is designed to evaluate the safety, PK, and pharmacodynamics, or PD, and antitumor activity of multiple doses of DCC-3014 in up to 55 patients with

advanced malignancies, including TGCT. The ongoing dose escalation study will determine the Phase 2 dose and the MTD using a 3+3 dose escalation design with a minimum of three patients enrolled at each dose level cohort, starting at a dose of 10 mg once daily. Loading doses administered in the second level cohort and subsequent cohorts were based on PK profiles observed in the first cohort. Subject to favorable results from the dose escalation study, we intend in the second half of 2020 to select a Phase 2 dose and initiate a Phase 2 expansion study. The Phase 2 study will be designed to evaluate the safety, tolerability, preliminary antitumor activity, PK, and PD of DCC-3014 in various cohorts including diffuse-type TGCT.

In October 2019, at the Triple Meeting 2019, we announced positive, preliminary, updated top-line data from the ongoing dose escalation Phase 1 study with DCC-3014 in patients with advanced malignancies. We also announced preliminary initial data from three diffuse-type TGCT patients enrolled in the dose escalation study in November 2019 at the Connective Tissue Oncology Society 2019 Annual Meeting, or CTOS 2019. Preliminary results from the ongoing dose escalation Phase 1 study, including the three initial patients with TGCT, are summarized below.

Safety, PK, and PD data were analyzed as of September 10, 2019, with additional anti-tumor activity data reported as of November 8, 2019. Tumor reductions from baseline were determined by investigator assessment by modified RECIST. As of the data cut-off date of September 10, 2019, increasing doses of DCC-3014 were assessed in seven dose cohorts across 39 patients with advanced solid tumor tumors, including three patients with diffuse-type TGCT. This included one dose cohort that received 10 mg QD and six dose cohorts that received a three to five day loading dose regimen at doses of up to 50 mg followed by a schedule of daily, once-weekly or twice-weekly, maintenance dosing with DCC-3014.

DCC-3014 was generally well-tolerated, and among TEAEs occurring in greater than or equal to 10% of patients, regardless of relatedness, most events were grade 1 or 2. Grade 3 or 4 related TEAEs occurred in four patients, which were grade 3 aspartate aminotransferase, or AST, increase, grade 4 lipase increased, grade 3 amylase increased, and grade 3 colitis; no grade 3 or 4 TEAEs occurred in the diffuse-type TGCT patients. Serious adverse events, or SAEs, were reported in 17 malignant solid tumor patients, none of which were related to DCC-3014 and there were no SAEs reported in diffuse-type TGCT patients. The most common TEAEs in greater than 10% of patients is shown in the table below.

Phase 1 Study of DCC-3014: Common (≥10%) TEAEs Regardless of Relatedness

Treatment related adverse events	Advanced solid tumor total n = 36		Diffuse-type TGCT n = 3		Total (All patients) n = 39	
	All	≥G3	All	≥G3	All	≥G3
Constipation	13 (36.1%)	0	1 (33.3%)	0	14 (35.9%)	0
Vomiting	12 (33.3%)	2 (5.6%)	1 (33.3%)	0	13 (33.3%)	2 (5.1%)
Diarrhea	10 (27.8%)	0	1 (33.3%)	0	11 (28.2%)	0
Nausea	10 (27.8%)	0	1 (33.3%)	0	11 (28.2%)	0
Fatigue	8 (22.2%)	2 (5.6%)	2 (66.7%)	0	10 (25.6%)	2 (5.1%)
Decreased appetite	9 (25%)	1 (2.8%)	0	0	9 (23.1%)	1 (2.6%)
Dyspnea	8 (22.2%)	0	1 (33.3%)	0	9 (23.1%)	0
Abdominal pain	7 (19.4%)	3 (8.3%)	1 (33.3%)	0	8 (20.5%)	3 (7.7%)
AST increased	5 (13.9%)	1 (2.8%)[a]	3 (100%)	0	8 (20.5%)	1 (2.6%)
Dehydration	7 (19.4%)	0	0	0	7 (17.9%)	0
Pyrexia	6 (16.7%)	0	1 (33.3%)	0	7 (17.9%)	0
Arthralgia	5 (13.9%)	1 (2.8%)	1 (33.3%)	0	6 (15.4%)	1 (2.6%)
Back pain	5 (13.9%)	0	1 (33.3%)	0	6 (15.4%)	0
Blood CPK increase	4 (11.1%)	0	2 (66.7%)	0	6 (15.4%)	0
Anemia	5 (13.9%)	1 (2.8%)	0	0	5 (12.8%)	1 (2.6%)
Asthenia	5 (13.9%)	0	0	0	5 (12.8%)	0
Cough	4 (11.1%)	0	1 (33.3%)	0	5 (12.8%)	0
Headache	3 (8.3%)	1 (2.8%)	2 (66.7%)	0	5 (12.8%)	1 (2.6%)
Pain in extremity	5 (13.9%)	0	0	0	5 (12.8%)	0
Periorbital edema	4 (11.1%)	0	1 (33.3%)	0	5 (12.8%)	0
Urinary tract infection	4 (11.1%)	0	1 (33.3%)	0	5 (12.8%)	0
Abdominal distension	4 (11.1%)	0	0	0	4 (10.3%)	0
Depression	4 (11.1%)	0	0	0	4 (10.3%)	0
Dyspepsia	4 (11.1%)	0	0	0	4 (10.3%)	0
Hypokalemia	4 (11.1%)	1 (2.8%)	0	0	4 (10.3%)	1 (2.6%)
Insomnia	4 (11.1%)	0	0	0	4 (10.3%)	0
Edema peripheral	4 (11.1%)	0	0	0	4 (10.3%)	0
Pain	3 (8.3%)	2 (5.6%)	1 (33.3%)	0	4 (10.3%)	2 (5.1%)

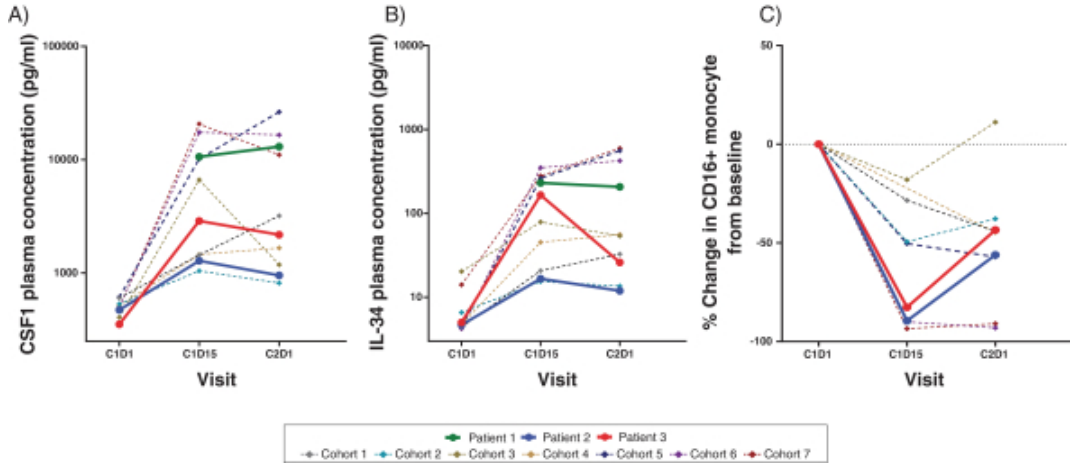
Key:

[a] Grade 2 by the central laboratory assessment.

AST, aspartate aminotransferase; CPK, creatine phosphokinase; G, grade.

Data from the Phase 1 trial also demonstrated approximately dose-proportional exposure for DCC-3014 and exposure was generally consistent between diffuse-type TGCT and solid tumor patients. As depicted in the graphs below, DCC-3014 treatment in this study demonstrated on-target PD inhibition of CSF1R by causing a dose-related rise in plasma CSF1 and IL-34 and a reduction of CD16+ monocytes in peripheral blood as well as decreases in CD163+ macrophages in tumor.

Phase 1 Study in DCC-3014: Pharmacodynamic Changes in Levels of Circulating A) CSF1 and B) IL-34 in Plasma and C) Changes in Levels of Whole Blood CD16+ Monocytes



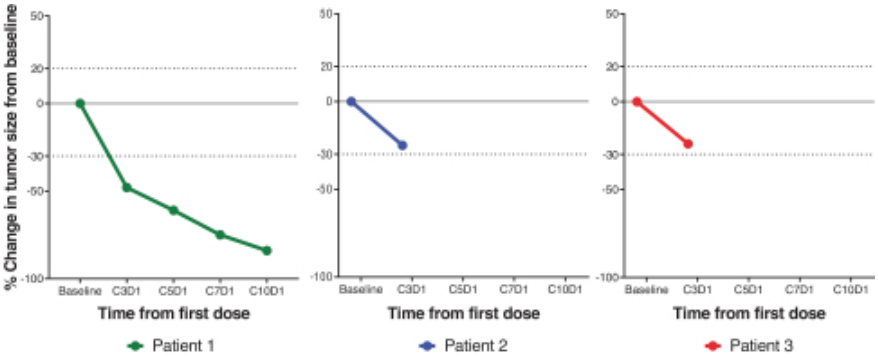
Key:

A and B: Levels of CSF1 and IL-34 in plasma were determined by standard ELISA. Plasma samples were collected from patients on Cycle 1 Day 1, Cycle 1 Day 15, and Cycle 2 Day 1.
C: Levels of CD16+ monocytes were assessed by flow cytometry. Whole blood samples were collected from patients on Cycle 1 Day 1, Cycle 1 Day 15, and Cycle 2 Day 1.

C, cycle; CSF1, colony stimulating factor 1; D, day; IL-34, interleukin 34.

All three patients with diffuse-type TGCT treated as of the data analyses dates showed preliminary anti-tumor activity, as depicted in the graph below. As of their first tumor assessment at Cycle 3 Day 1, tumor reductions from baseline of 48%, 25% and 24%, respectively, were observed. One patient had a confirmed partial response, which had been sustained for nine months and was ongoing as of the most recent investigator report (as of the November 2019 analyses date), with a tumor reduction from baseline of 84% as of Cycle 10 Day 1. Symptomatic improvements in mobility and reduced pain, as reported by the investigator, were observed. These patients were enrolled in cohort 5, 30 mg loading dose daily for five days followed by a maintenance dose of 30 mg twice a week. Two patients remained on study as of the November 2019 data analyses date. One patient discontinued in Cycle 4 due to relocation outside of the U.S.

Phase 1 Study of DCC-3014: Three Initial Patients with Diffuse-Type TGCT
Changes from Baseline in Tumor Size Assessed per RECIST, version 1.1



Key:

—Dashed lines denote 30% decrease and 20% increase in tumor size threshold for partial response and progressive disease, respectively, per RECIST version 1.1.

—C, cycle; D, day; RECIST, response evaluation criteria in solid tumors.

The Phase 1 data described above are based on investigator assessment of tumor response and symptomatic improvements for TGCT patients were based on descriptive notes obtained from investigators. This data set is in a very small number of patients, including without limitation, only three diffuse-type TGCT patients, and may not be predictive of, or consistent with, the complete, additional or final results of this study or later studies.

Rebastinib: A Potent and Selective TIE2 Inhibitor

Rebastinib is an investigational, orally administered, potent, and selective inhibitor of the TIE2 immunokinase, the receptor for angiopoietins, an important family of vascular growth factors. Rebastinib binds potently into the switch pocket of TIE2, stabilizing the inhibitory switch and displacing the activation switch to block TIE2 signaling. TIE2 has an important role in regulating tumor angiogenesis, invasiveness, metastasis, and immunotolerance in a manner analogous to CSF1R. Whereas CSF1R is expressed on TAMs in certain cancers, there is a different and distinct population of pro-tumoral M2 macrophages in which TIE2 is active, known as TIE2 expressing macrophages, or TEMs.

Ongoing Phase 1b/2 Studies of Rebastinib in Combination with Chemotherapy

Rebastinib is currently in clinical development for the treatment of multiple solid tumors in combination with chemotherapy in two Phase 1b/2 studies.

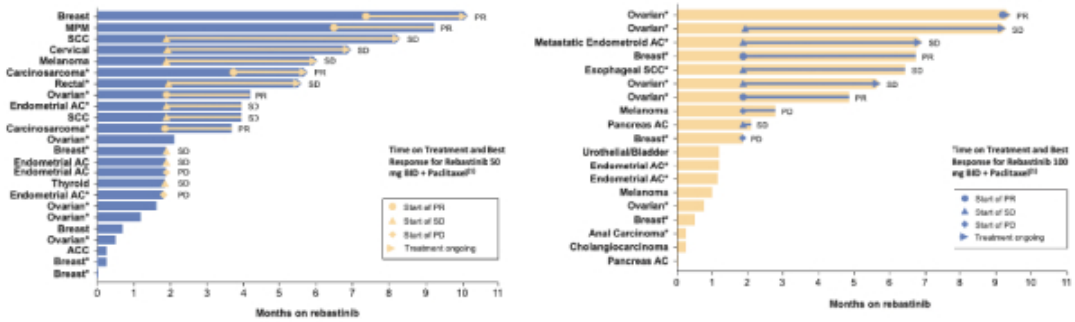
In October 2018, we announced that we initiated an open-label, multicenter, two-part Phase 1b/2 study of rebastinib in combination with paclitaxel to assess safety, tolerability, PK, and efficacy in patients with advanced or metastatic solid tumors. Part 1 of this study was designed to evaluate the safety, tolerability, and PK of 50 mg and 100 mg rebastinib BID when administered in combination with paclitaxel, and to determine the Phase 2 dose of rebastinib in combination with paclitaxel, in patients with advanced or metastatic solid tumors that are refractory to standard therapies. In Part 2 of this study, the safety, tolerability, and efficacy of the Phase 2 dose of rebastinib in combination with weekly paclitaxel is being assessed across multiple cohorts, including: breast, ovarian, and endometrial cancers. This study enrolled 43 evaluable patients in Part 1 and will

enroll up to 132 evaluable patients in Part 2. At the Triple Meeting 2019, we presented preliminary data from 43 patients from Part 1 of the study, including 24 patients from the rebastinib 50 mg oral BID with paclitaxel 80 mg/m^2 IV cohort and 19 patients from the rebastinib 100 mg oral BID with paclitaxel 80 mg/m^2 IV cohort.

Rebastinib in combination with paclitaxel was generally well-tolerated, with similar frequency of TEAEs between the two dose cohorts, and most TEAEs were consistent with the first-in-human study of rebastinib, or known to be associated with treatment with paclitaxel. One patient experienced a rebastinib-related SAE (grade 2 muscular weakness), and four patients had an SAE related to paclitaxel and rebastinib (five events including grade 3 pneumonia (n=2), grade 3 nausea (n=1), grade 3 vomiting (n=1), and grade 2 myocardial ischemia (n=1)). Based on the observed frequency of muscular weakness in preliminary data from the ongoing Part 2 portion of the study with the 100 mg BID dose, the Phase 2 dose was changed from 100 mg BID to 50 mg BID.

Preliminary results from Part 1 included encouraging early signals of anti-tumor activity observed in both dose cohorts, with objective responses seen across a heavily pre-treated patient population, including patients with prior exposure to paclitaxel. Objective responses were seen in eight patients including ovarian (3), breast (2), carcinosarcoma (2), and peritoneal mesothelioma (1), seven of whom had prior therapy with paclitaxel or docetaxel. A best response of partial response was observed in 5 of 24 patients in the 50 mg BID dose cohort and 3 of 19 patients in the 100 mg BID dose. The charts below illustrate the time on treatment and best response in both dose cohorts for Part 1 of the study.

Phase 1b/2 Study of Rebastinib in Combination with Paclitaxel: Part 1:
Time on Treatment and Best Response for Rebastinib 50 and 100 mg BID + Paclitaxel



Notes: Data presented at AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics 2019; AC=adenocarcinoma; ACC=adrenocortical carcinoma; MPM=malignant peritoneal mesothelioma; PD=progressive disease; PR=partial response; SCC=squamous cell carcinoma; SD=stable disease; (1) Tumor responses were evaluated by the investigator according to Response Evaluation Criteria in Solid Tumors 1.1 criteria; as per study protocol, includes confirmed and unconfirmed responses; *prior paclitaxel therapy; †patient did not receive prior paclitaxel, but did receive prior docetaxel.

Exposure to rebastinib in this study was dose-proportional at the 50 mg BID and 100 mg BID doses when administered in combination with paclitaxel. Mean circulating angiopoietin-2 levels increased with exposure to higher doses of rebastinib in combination with paclitaxel.

Part 2 of the study is ongoing. We expect to report Phase 1b/2 data with rebastinib in combination with paclitaxel in the second half of 2020.

In January 2019, we announced that we initiated an open-label, multicenter, Phase 1b/2 study of rebastinib in combination with carboplatin in patients with advanced or metastatic solid tumors. Part 1 (3+3 dose escalation) of this two-part study is designed to evaluate the safety, tolerability, and PK of 50 mg and 100 mg rebastinib BID when administered in combination with carboplatin, and to determine the Phase 2 dose of rebastinib in combination with carboplatin, in patients with advanced or metastatic solid tumors that are refractory to standard therapies. In Part 2, the safety, tolerability, and efficacy of the Phase 2 dose of rebastinib in combination with carboplatin administered once every three weeks will be assessed across multiple disease cohorts, including: breast cancer, ovarian cancer, and mesothelioma. This study is expected to enroll up to 117 patients in total, with approximately 18 patients in Part 1 and up to 99 patients in Part 2. We have completed Part 1, selected a Phase 2 dose of 100 mg BID of rebastinib and activated Part 2 of the Phase 1b/2 study of rebastinib in combination with carboplatin. We expect to report Phase 1b/2 data with rebastinib in combination with carboplatin in the second half of 2020.

Employees

We have operated by leveraging skilled experts, consultants, contract research organizations, and contractors to manage our clinical operations, under the leadership and direction of our management. We will expand our infrastructure to manage our operations, including commercial, with additional full-time employees.

As of January 31, 2020, we had 249 full-time employees and 3 part-time employees, 76 of whom hold Ph.D. or M.D. degrees. Of our full-time employees, 36 were engaged in research and development activities and 56 were engaged in general and administrative activities. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Recent developments

In December 2019, we submitted a new drug application, or NDA, to the U.S. Food and Drug Administration, or FDA, for our lead drug candidate, ripretinib, for the treatment of patients with advanced gastrointestinal stromal tumors, or GIST, who have received prior treatment with imatinib, sunitinib, and regorafenib. Our NDA is based on positive results from our first Phase 3 study, INVICTUS, in fourth-line and fourth-line plus GIST patients, for whom there are currently no approved therapies in the U.S. other than avapritinib, which is approved for GIST patients with PDGRFa exon 18 mutations only (estimated to be approximately six percent of all patients with newly-diagnosed GIST). In August 2019, we announced top-line results from INVICTUS, including that the study achieved its primary endpoint of improved progression free survival, or PFS, compared to placebo as determined by blinded independent radiologic review using modified Response Evaluation Criteria in Solid Tumors, or RECIST, version 1.1. In February 2020, the FDA accepted our NDA for ripretinib for the treatment of patients with advanced GIST, granted priority review and set an action date of August 13, 2020 under the Prescription Drug User Fee Act, or PDUFA.

We are currently in the process of finalizing our financial results for the three months and year ended December 31, 2019. Based on preliminary unaudited information available to management as of the date hereof and subject to completion by management of our financial statements as of and for the quarter and the year ended December 31, 2019, we expect to have cash, cash equivalents and short-term investments as of December 31, 2019 of approximately $579.0 million, as compared to $634.6 million at September 30, 2019. The preliminary data has been prepared by, and is the responsibility of, our management. PricewaterhouseCoopers LLP, our independent registered public accounting firm, has not audited, reviewed, compiled, or applied agreed-upon-procedures with respect to such preliminary financial data. Accordingly, PricewaterhouseCoopers

LLP does not express an opinion or any other form of assurance with respect thereto. These results could change as a result of further review. Complete quarterly and annual results will be included in our Annual Report on Form 10-K for the year ended December 31, 2019.

Company information

Deciphera Pharmaceuticals, LLC was formed and commenced operations in 2003. Deciphera Pharmaceuticals, Inc. was incorporated under the laws of Delaware on August 1, 2017, for the sole purpose of completing an initial public offering and related transactions in order to carry on the business of Deciphera Pharmaceuticals, LLC. We are the sole managing member of Deciphera Pharmaceuticals, LLC and conduct all our business through, operate and control all of the businesses and affairs of Deciphera Pharmaceuticals, LLC, our wholly owned subsidiary, directly or through blocker entities which are also wholly owned by us.

On October 2, 2017, we completed the initial public offering of our common stock, or IPO. On October 2, 2017, immediately prior to the completion of the IPO, we engaged in a series of transactions whereby Deciphera Pharmaceuticals, LLC became a wholly owned subsidiary of Deciphera Pharmaceuticals, Inc., a Delaware corporation. As part of the transactions, shareholders of Deciphera Pharmaceuticals, LLC exchanged their shares of Deciphera Pharmaceuticals, LLC for shares of Deciphera Pharmaceuticals, Inc. on a one-for-5.65 basis.

Our principal executive offices are located at 200 Smith Street, Waltham, MA 02451, and our telephone number is (781) 209-6400. Our corporate website address is www.deciphera.com. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

Implications of being an emerging growth company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- reduced disclosure about our executive compensation arrangements;
- exemption from holding the non-binding advisory votes on executive compensation, including golden parachute arrangements; and
- exemption from the auditor attestation requirement in the assessment of our internal controls over financial reporting.

We have taken advantage of certain reduced reporting burdens in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein. Accordingly, the information contained herein and therein may be different than the information you receive from other public companies in which you hold stock.

We will remain an “emerging growth company” until the earlier of (i) the last day of the fiscal year (a) following the fifth anniversary of the completion of the IPO, (b) in which we have total annual gross revenue of at least $1.07 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (ii) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, are subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

The offering

Common stock offered by us	3,181,818 shares
Common stock to be outstanding after this offering	54,225,730 shares
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase 477,272 additional shares of our common stock.
Use of Proceeds	We estimate that the net proceeds to us from the shares sold by us to the underwriters in this offering, after deducting estimated offering expenses payable by us, will be approximately $163.7 million. We currently intend to use the net proceeds from this offering as follows: • approximately $25.0 million to fund continued growth of our commercial and medical affairs capabilities to support our transition from a development-stage company toward a commercial-stage company including pursuing development and potential commercialization in second-line GIST; • approximately $20.0 million to fund clinical trials for ripretinib, including the expansion stage of our current Phase 1 clinical trial, our ongoing pivotal Phase 3 clinical trial, and additional clinical trials, as well as clinical research outsourcing and manufacturing of clinical trial material, and pre-commercialization manufacturing process development and validation; • approximately $35.0 million to fund clinical trials for DCC-3014, including the expansion stage of our current Phase 1 clinical trial, and additional clinical trials as well as clinical research outsourcing and manufacturing of clinical trial material; • approximately $15.0 million to fund clinical trials for rebastinib, including our current Phase 1b/2 clinical trials, and additional clinical trials as well as clinical research outsourcing and manufacturing of clinical trial material; • approximately $10.0 million to fund IND-enabling studies and the potential development of DCC-3116; • approximately $15.0 million to fund new and ongoing research activities for future drug candidates using our proprietary kinase switch control inhibitor platform; and • the remainder for working capital purposes, including general operating expenses.

	See “Use of Proceeds” for more information.
Risk Factors	Investing in our common stock involves a high degree of risk. You should read the “Risk Factors” section of this prospectus supplement, as well as those risk factors that are incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of factors to consider carefully before deciding to purchase shares of our common stock.
The Nasdaq Global Select Market symbol	“DCPH”

The above discussion and table are based on 51,043,912 shares of our common stock issued and outstanding as of September 30, 2019, and excludes the following:

- 6,891,125 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2019 under our 2015 Equity Incentive Plan and our 2017 Stock Option and Incentive Plan, or the 2017 Plan, at a weighted average exercise price of $16.65 per share;
- 67,000 shares of our common stock issuable upon the settlement of unvested restricted stock units outstanding as of September 30, 2019 under our 2017 Plan;
- 1,517,723 shares of our common stock available for future issuance under our 2017 Plan; and
- 1,009,433 shares of our common stock reserved for issuance under our 2017 Employee Stock Purchase Plan.

Unless otherwise indicated, this prospectus supplement reflects and assumes the following:

- no exercise of outstanding stock options described above; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

Risk factors

Your investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should carefully consider the risks discussed under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2018 and contained in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, which are incorporated by reference in this prospectus supplement and the accompanying prospectus in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference herein and therein, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks related to our common stock and this offering

If you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution in the book value of your investment.

The price per share of our common stock in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Therefore, if you purchase shares of our common stock in this offering, you may pay a price per share that substantially exceeds our net tangible book value per share after this offering. To the extent shares are issued under outstanding options at exercise prices lower than the price of our common stock in this offering, you will incur further dilution. See the section entitled "Dilution" below for a more detailed illustration of the dilution you would incur if you participate in this offering.

We have broad discretion in the use of our cash, cash equivalents and short-term investments, including the net proceeds we receive in this offering, and may not use them effectively.

Our management has broad discretion to use our cash, cash equivalents and short-term investments, including the net proceeds we receive in this offering, to fund our operations and could spend these funds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our drug candidates. Pending their use to fund our operations, we may invest our cash, cash equivalents and short-term investments, including the net proceeds from this offering, in a manner that does not produce income or that loses value.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable for our common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering.

Sales of a substantial number of shares of our common stock in the public market after this offering could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock. In addition, the sale of substantial amounts of our common stock could adversely impact the price of our common stock. As of September 30, 2019, 51,043,912 shares of our common stock were outstanding. The sale, or the availability for sale, of a large number of shares of our common stock in the public market could cause the price of our common stock to decline.

Our stock price has been and is likely to be volatile and may fluctuate substantially. For example, the market price for our common stock has varied between a high price of $71.11 on February 11, 2020 and a low price of $19.88 on August 12, 2019 in the twelve-month period ending on February 13, 2020. The stock market in general and the market for pharmaceutical and biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- the success of competitive drugs or technologies;
- results of clinical trials of our drug candidates or those of our competitors;
- regulatory or legal developments in the United States and other countries;
- our ability to successfully commercialize our drug candidates, including ripretinib, if approved;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our drug candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional drug candidates or drugs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this “Risk Factors” section.

Sales of a significant number of shares of our common stock in the public markets, or the perception that such sales could occur, could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have 54,225,730 outstanding

shares of common stock. This includes the shares that we are selling in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, approximately 16.7 million shares are subject to a contractual lock-up with the underwriters for this offering 90 days following the date of the underwriting agreement. These shares are eligible for sale in the public market under Rule 144 of the Securities Act, subject to the volume limitations and other conditions of Rule 144, after the earlier of the expiration of, or release from, the lock-up period. The holders of these shares may at any time decide to sell their shares in the public market.

Moreover, holders of an aggregate of approximately 27,262,799 shares of our common stock as of September 30, 2019 have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We have also registered all shares of common stock that we may issue under our equity compensation plans. As a result, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described above, to the extent applicable.

Use of proceeds

We estimate that the net proceeds from the sale of shares of common stock to the underwriters in this offering will be approximately $163.7 million ($188.4 million if the underwriters' option to purchase additional shares is exercised in full), after deducting estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering for the following:

- approximately $25.0 million to fund continued growth of our commercial and medical affairs capabilities to support our transition from a development-stage company toward a commercial-stage company including pursuing development and potential commercialization in second-line GIST;
- approximately $20.0 million to fund clinical trials for ripretinib, including the expansion stage of our current Phase 1 clinical trial, our ongoing pivotal Phase 3 clinical trial, and additional clinical trials, as well as clinical research outsourcing and manufacturing of clinical trial material, and pre-commercialization manufacturing process development and validation;
- approximately $35.0 million to fund clinical trials for DCC-3014, including the expansion stage of our current Phase 1 clinical trial, and additional clinical trials as well as clinical research outsourcing and manufacturing of clinical trial material;
- approximately $15.0 million to fund clinical trials for rebastinib, including our current Phase 1b/2 clinical trials, and additional clinical trials as well as clinical research outsourcing and manufacturing of clinical trial material;
- approximately $10.0 million to fund IND-enabling studies and the potential development of DCC-3116;
- approximately $15.0 million to fund new and ongoing research activities for future drug candidates using our proprietary kinase switch control inhibitor platform; and
- the remainder for working capital purposes, including general operating expenses.

The expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, feedback from regulatory authorities, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our drug candidates, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We may find it necessary or advisable to use the net proceeds from this offering for other purposes, and we will have broad discretion in the application of net proceeds.

Pending use of the proceeds as described above, we intend to invest the proceeds in a variety of capital preservation instruments, including high quality, investment grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government, or may hold such proceeds as cash, until they are used for their stated purpose.

After the completion of this offering, assuming net proceeds to us, after deducting estimated offering expenses payable by us, of $163.7 million, we expect that our cash, cash equivalents and short- and long-term investments, will be sufficient to fund our current operating and capital expenditure plans into the second half of 2022. Our future capital requirements will depend on many factors, including those discussed in "Liquidity and Capital Resources" of our Quarterly Report on Form 10-Q for the period ended September 30, 2019.

Dilution

If you invest in this offering, your ownership interest will be diluted immediately to the extent of the difference between the public offering price per share and the as-adjusted net tangible book value per share of our common stock after giving effect to this offering. We calculate net tangible book value per share by dividing the net tangible book value, which is tangible assets less total liabilities, by the number of outstanding shares of our common stock. Dilution represents the difference between the portion of the amount per share paid by purchasers of shares in this offering and the as adjusted net tangible book value per share of our common stock immediately after giving effect to this offering. Our net tangible book value as of September 30, 2019 was approximately $605.6 million, or $11.86 per share.

After giving effect to the sale of 3,181,818 shares of our common stock pursuant to this prospectus supplement and accompanying prospectus at the public offering price of $55.00 per share, and after deducting commissions and estimated aggregate offering expenses payable by us, our net tangible book value as of September 30, 2019 would have been $769.3 million, or $14.19 per share of common stock. This represents an immediate increase in the net tangible book value of $2.33 per share to our existing stockholders and an immediate dilution in net tangible book value of $40.81 per share to new investors. The following table illustrates this per share dilution:

Public offering price per share		$55.00
Net tangible book value per share as of September 30, 2019	$11.86	
Increase per share to existing stockholders	$ 2.33	
As adjusted net tangible book value per share as of September 30, 2019 after giving effect to this offering		$14.19
Dilution per share to new investors purchasing shares in this offering		$40.81

The above discussion and table are based on 51,043,912 shares of our common stock issued and outstanding as of September 30, 2019, and excludes the following:

- 6,891,125 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2019 under our 2015 Equity Incentive Plan and our 2017 Stock Option and Incentive Plan, or the 2017 Plan, at a weighted average exercise price of $16.65 per share;
- 67,000 shares of our common stock issuable upon the settlement of unvested restricted stock units outstanding as of September 30, 2019 under our 2017 Plan;
- 1,517,723 shares of our common stock available for future issuance under our 2017 Plan; and
- 1,009,433 shares of our common stock reserved for issuance under our 2017 Employee Stock Purchase Plan.

To the extent that any options are exercised, new equity awards are granted under our equity incentive plans, or we otherwise issue additional shares of common stock in the future, there will be further dilution to new investors.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

Market for common stock

The principal market on which our common stock is being traded is The Nasdaq Global Select Market under the symbol “DCPH.” As of September 30, 2019, there were 51,043,912 shares of our common stock outstanding, held of record by five stockholders, which excludes stockholders whose shares were held in nominee or street name by brokers. On February 13, 2020, the closing price for the common stock as reported on The Nasdaq Global Select Market was $58.44.

Dividend policy

We have not declared or paid any cash dividends on our capital stock since our inception. We currently intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law and other factors the board deems relevant.

Material U.S. federal income tax considerations

The following discussion is a summary of certain material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is neither a U.S. person nor an entity nor arrangement treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. Court and the control of one or more “United States person” (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. Federal income tax purposes.

This discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset, generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder’s individual circumstances nor does it address any aspects of U.S. state, local or non-U.S. taxes, the alternative minimum tax, the Medicare tax on net investment income or any U.S. federal tax other than the income tax (including, for example, the estate tax). This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- pension plans;

- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- “qualified foreign pension funds,” or entities wholly owned by a “qualified foreign pension fund”;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and partners and investors therein);
- persons that have a functional currency other than the U.S. dollar;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- persons for whom our stock constitutes “qualified small business stock” within the meaning of Section 1202 of the Code;
- investors in pass-through entities (or entities that are treated as disregarded entities for U.S. federal income tax purposes); and
- certain U.S. expatriates.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their own tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

Distributions on our common stock

Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on sale or other taxable disposition of our common stock.” Any such distributions will also be subject to the discussion below under the section titled “Withholding and information reporting requirements—FATCA.”

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing a U.S. tax return with the IRS.

Gain on sale or other taxable disposition of our common stock

Subject to the discussion below under "Withholding and information reporting requirements—FATCA," a non-U.S. holder generally will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed-base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on our common stock" also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale of other taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market, within the meaning of the relevant provisions of the code, and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. If we are determined to be a U.S. real property holding corporation and the foregoing exception does not apply, then the non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code), except that the branch profits tax generally will not apply. If we are a U.S. real property holding corporation and our common stock is not regularly traded on an established securities market, a non-U.S. holder's proceeds received on the disposition of shares will also generally be subject to withholding at a rate of 15%. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Backup withholding and information reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in “Distributions on our common stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding and information reporting requirements—FATCA

The Foreign Account Tax Compliance Act, or FATCA, generally imposes a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

The preceding discussion of material U.S. federal tax considerations is for general information only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed changes in applicable laws.

Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC, Piper Sandler & Co. and Jefferies LLC are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities LLC	1,240,909
Piper Sandler & Co.	731,818
Jefferies LLC	731,818
Guggenheim Securities, LLC	318,182
SunTrust Robinson Humphrey, Inc	159,091
Total	3,181,818

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $1.98 per share. After the initial offering of the shares to the public, the offering price and other selling terms may be changed by the underwriters.

The underwriters have an option to buy up to 477,272 additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option. If any shares are purchased with this option, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is $3.30 per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without exercise of option to purchase additional shares	With full exercise of option to purchase additional shares
Per Share	$ 3.30	$ 3.30
Total	$ 10,499,990.40	$ 12,074,997.00

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately $0.8 million. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to $30,000.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not (i) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC, Piper Sandler & Co. and Jefferies LLC for a period of 90 days after the date of this prospectus, other than the shares of our common stock to be sold hereunder, any shares of our common stock issued upon the exercise of options granted under our existing management incentive plans and other limited exceptions.

Our directors and executive officers, and certain of our stockholders holding an aggregate of 16,694,890 shares of our common stock as of December 31, 2019 have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus, may not, without the prior written consent of J.P. Morgan Securities LLC, Piper Sandler & Co. and Jefferies LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale, pledge or disposition, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of our common stock or such other securities, in cash or otherwise or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock, in each case subject to certain exceptions, including:

(i) transfers of shares of our common stock as a bona fide gift; provided that such donee agrees to be bound by the lock-up provisions;

(ii) in the event such stockholder is a corporation, partnership, limited liability company, trust or other business entity, (a) transfers to another corporation, partnership, limited liability company, trust or other affiliate or (b) distributions without consideration to its stockholders, partners, members or other equity holders; provided that in each case, such transferee agrees to be bound by the lock-up provisions;

(iii) sales or other transfers of any such director, officer or stockholder’s shares of common stock acquired in this offering or transactions relating to any such director, officer or stockholder’s shares of common stock acquired in open market transactions after the effective date of the registration statement for this offering;

(iv) transfers of shares of our common stock to an immediate family member of such director, officer or stockholder or any trust or other legal entity for the direct or indirect benefit of such director, officer or stockholder or the immediate family member of such director, officer or stockholder, or if the stockholder is a trust, to any beneficiary of such stockholder; provided that any such transferee agrees to be bound by the lock-up provisions, and provided further that any such transfer shall not involve a disposition for value;

(v) transfers of shares of our common stock by will or intestate succession upon the death of a director, officer or stockholder;

(vi) transfers of shares of our common stock by operation of law or by order of a court of competent jurisdiction pursuant to a qualified domestic order or in connection with a divorce settlement;

(vii) the surrender or forfeiture of such director, officer or stockholder's shares of our common stock to satisfy (x) tax withholding obligations upon exercise or vesting or (y) the exercise price upon a cashless net exercise, in each case, of share options, equity awards, warrants or other right to acquire shares of our common stock pursuant to equity compensation plans described or incorporated by reference in this prospectus;

(viii) the exercise of any option, warrant or other rights to acquire shares of our common stock or other securities, the settlement of any share-settled share appreciation rights, restricted shares or restricted share units or the conversion of any convertible security into shares of our common stock; provided that any such shares or other securities issued continue to be subject to the lock-up provisions;

(ix) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction in each case made to all holders of our common stock, involving a change of control; provided that in the event that such transaction is not completed, such director, officer or stockholder's shares shall remain subject to the lock-up provisions;

(x) transfers of such director, officer or stockholder arising as a result of the termination of employment and pursuant to employment agreements under which we have the option to repurchase such director, officer or stockholder's shares or a right of first refusal with respect to the transfer of such director, officer or stockholder's shares; and

(xi) transfers made pursuant to a contract, instruction or plan adopted pursuant to Rule 10b5-1 of the Exchange Act, or a Plan, prior to the date of this prospectus supplement.

The lock-up agreements will also not apply to the establishment of a Plan by such director, officer or stockholder; provided that such Plan does not provide for the transfer of common stock during the 90-day period referred to above.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Our common stock is listed on The Nasdaq Global Select Market under the symbol "DCPH."

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be "naked" shorts, which are short positions in excess of

that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The Nasdaq Global Select Market, in the over-the-counter market or otherwise.

Other relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities.

Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they may receive customary fees and expenses.

In addition, in the ordinary course of business, the underwriters and their respective affiliates may make or hold a broad array of investments including serving as counterparties to certain derivative and hedging arrangements and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriters and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this

prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Notice to prospective investors in the European Economic Area

In relation to each Member State of the European Economic Area (each a "Member State"), no Shares have been offered or will be offered pursuant to this offering to the public in that Member State prior to the publication of a prospectus in relation to the Shares which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation), except that offers of Shares may be made to the public in that Member State at any time under the following exemptions under the Prospectus Regulation:

- to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or
- in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Shares shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any Shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase or subscribe for any Shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Notice to prospective investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons") or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Notice to prospective investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration

Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to prospective investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to prospective investors in the Dubai International Financial Centre ("DIFC")

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority ("DFSA"). This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

Notice to prospective investors in the United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

Notice to prospective investors in Australia

This prospectus:

- does not constitute a product disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the "Corporations Act");
- has not been, and will not be, lodged with the Australian Securities and Investments Commission ("ASIC"), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document under Chapter 6D.2 of the Corporations Act;
- does not constitute or involve a recommendation to acquire, an offer or invitation for issue or sale, an offer or invitation to arrange the issue or sale, or an issue or sale, of interests to a "retail client" (as defined in section 761G of the Corporations Act and applicable regulations) in Australia; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, or Exempt Investors, available under section 708 of the Corporations Act.

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those securities to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any "resident" of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance

with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to prospective investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to prospective investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Solely for the purposes of its obligations pursuant to sections 309B(1)(a) and 309B(1)(c) of the Securities and Futures Act (Chapter 289 of Singapore) (the "SFA"), we have determined, and hereby notify all relevant persons (as defined in Section 309A of the SFA) that the shares of common stock are "prescribed capital markets products" (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Notice to prospective investors in Bermuda

Shares may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

Notice to prospective investors in Saudi Arabia

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority ("CMA") pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended (the "CMA Regulations"). The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorised financial adviser.

Notice to prospective investors in the British Virgin Islands

The shares are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of the Company. The shares may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands), "BVI Companies"), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

Notice to prospective investors in China

This prospectus does not constitute a public offer of shares, whether by sale or subscription, in the People's Republic of China (the "PRC"). The shares are not being offered or sold directly or indirectly in the PRC to or for the benefit of, legal or natural persons of the PRC.

Further, no legal or natural persons of the PRC may directly or indirectly purchase any of the shares or any beneficial interest therein without obtaining all prior PRC's governmental approvals that are required, whether statutorily or otherwise. Persons who come into possession of this document are required by the issuer and its representatives to observe these restrictions.

Notice to prospective investors in Korea

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder (the "FSCMA"), and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in

Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder (the "FETL"). The shares have not been listed on any of securities exchanges in the world including, without limitation, the Korea Exchange in Korea. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

Notice to prospective investors in Malaysia

No prospectus or other offering material or document in connection with the offer and sale of the shares has been or will be registered with the Securities Commission of Malaysia ("Commission") for the Commission's approval pursuant to the Capital Markets and Services Act 2007. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than (i) a closed end fund approved by the Commission; (ii) a holder of a Capital Markets Services Licence; (iii) a person who acquires the shares, as principal, if the offer is on terms that the shares may only be acquired at a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction; (iv) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies), excluding the value of the primary residence of the individual; (v) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding 12 months; (vi) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding 12 months; (vii) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts; (viii) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies); (ix) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010; (x) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010; and (xi) any other person as may be specified by the Commission; provided that, in the each of the preceding categories (i) to (xi), the distribution of the shares is made by a holder of a Capital Markets Services Licence who carries on the business of dealing in securities. The distribution in Malaysia of this prospectus is subject to Malaysian laws. This prospectus does not constitute and may not be used for the purpose of public offering or an issue, offer for subscription or purchase, invitation to subscribe for or purchase any securities requiring the registration of a prospectus with the Commission under the Capital Markets and Services Act 2007.

Notice to prospective investors in Taiwan

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

Notice to prospective investors in South Africa

Due to restrictions under the securities laws of South Africa, the shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions applies:

i the offer, transfer, sale, renunciation or delivery is to:

(a) persons whose ordinary business is to deal in securities, as principal or agent;

(b) the South African Public Investment Corporation;

(c) persons or entities regulated by the Reserve Bank of South Africa;

(d) authorized financial service providers under South African law;

(e) financial institutions recognized as such under South African law;

(f) a wholly owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorized portfolio manager for a pension fund or collective investment scheme (in each case duly registered as such under South African law); or

(g) any combination of the person in (a) to (f); or

ii the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000.

No “offer to the public” (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted) (the “South African Companies Act”)) in South Africa is being made in connection with the issue of the shares. Accordingly, this document does not, nor is it intended to, constitute a “registered prospectus” (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. Any issue or offering of the shares in South Africa constitutes an offer of the shares in South Africa for subscription or sale in South Africa only to persons who fall within the exemption from “offers to the public” set out in section 96(1)(a) of the South African Companies Act. Accordingly, this document must not be acted on or relied on by persons in South Africa who do not fall within section 96(1)(a) of the South African Companies Act (such persons being referred to as “SA Relevant Persons”). Any investment or investment activity to which this document relates is available in South Africa only to SA Relevant Persons and will be engaged in South Africa only with SA relevant persons.

Legal matters

The validity of the shares of common stock offered hereby will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Certain legal matters with respect to this offering will be passed upon for the underwriters Davis Polk & Wardwell LLP, New York, New York.

Experts

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2018 have been so incorporated in reliance on the report (which contains an emphasis of matter relating to the Company's requirement for additional financing to fund future operations) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where you can find more information

We file annual, quarterly and current reports, proxy statements and other information with the SEC pursuant to the reporting and information requirements of the Exchange Act. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.deciphera.com. Our website is not a part of this prospectus supplement and is not incorporated by reference in this prospectus supplement.

This prospectus supplement is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus supplement and the accompanying prospectus regarding us and the securities, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's internet site.

Incorporation of certain information by reference

The SEC allows us to incorporate by reference in this prospectus supplement and the accompanying prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus supplement and the accompanying prospectus is considered to be part of this prospectus supplement and the accompanying prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus supplement and the accompanying prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus supplement and the accompanying prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement, the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement and the accompanying prospectus incorporate by reference the documents listed below (File No. 001-38219) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on March 14, 2019;
- Quarterly Reports on Form 10-Q for the periods ended March 31, 2019, filed with the SEC on May 9, 2019, June 30, 2019, filed with the SEC on August 2, 2019, and September 30, 2019, filed with the SEC on November 4, 2019;

- Current Reports on Form 8-K, filed with the SEC on February 22, 2019, March 4, 2019, May 3, 2019, June 11, 2019, June 13, 2019, July 8, 2019, August 13, 2019, August 15, 2019, November 26, 2019, December 4, 2019 and December 16, 2019 (to the extent the information in such report is filed and not furnished);
- The information included in our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 22, 2019, to the extent incorporated by reference into Part III of the Annual Report on Form 10-K for the fiscal year ended December 31, 2018; and
- The description of our Common Stock contained in our Registration Statement on Form 8/A, dated September 27, 2017, including any amendments or reports filed for the purpose of updating such description.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Deciphera Pharmaceuticals, Inc., 200 Smith Street, Waltham, Massachusetts 02451, Attention: Secretary or by telephone request to (781) 209-6400.

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PROSPECTUS

Common Stock
Preferred Stock
Debt Securities
Warrants
Units

From time to time, we may offer and sell our Common Stock, Preferred Stock, Debt Securities, Warrants or Units, in each case in one or more issuances and at prices and on terms that we will determine at the time of the offering.

This prospectus describes the general manner in which any of these securities may be offered using this prospectus. We will specify in an accompanying prospectus supplement the terms of the securities offered and other details regarding the offering thereof.

Our common stock is listed on The Nasdaq Global Select Market under the symbol "DCPH."

We are an "emerging growth company" as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we are subject to reduced public company reporting requirements. Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "*Risk Factors*" on page 6 of this prospectus and under any similar heading in the documents that are incorporated by reference into this prospectus, as well as "*Special Note Regarding Forward-Looking Statements*" on page 3 of this prospectus. You should read the entire prospectus carefully before you make your investment decision.

The securities covered by this prospectus may be sold directly by us to investors, through agents designated by us from time to time or through underwriters or dealers at prices and on terms to be determined at the time of offering. We will include in an applicable prospectus supplement the names of any underwriters or agents and any applicable commissions or discounts. Additional information on the methods of sale appears under "*Plan of Distribution*" in this prospectus. We will also describe in an applicable prospectus supplement the way(s) in which we expect to use the net proceeds we receive from any sale.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

The date of this prospectus is February 12, 2020.

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You should rely only on the information contained or incorporated by reference in this prospectus and in an applicable prospectus supplement to this prospectus. We have not authorized any other person to provide you with different or additional information. If anyone provides you with different, additional or inconsistent information, you should not rely on it. We do not take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities or soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any applicable prospectus supplement or any free writing prospectus we authorize to be delivered to you is accurate only as of the date of that document or any other date set forth in that document. Additionally, any information we have incorporated by reference in this prospectus or in any applicable prospectus supplement is accurate only as of the date of the document incorporated by reference or other date set forth in that document, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any sale of securities. Our business, financial condition, results of operations, cash flow and prospects may have changed since that date.

This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference contains market data, industry statistics and other data that have been obtained or compiled from information made available by independent third parties. We have not independently verified the accuracy and completeness of such data. This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference include trademarks, service marks and trade names owned by us or other companies. Solely for convenience, we may refer to our trademarks included or incorporated by reference in this prospectus, any applicable prospectus supplement or any free writing prospectus without the TM or ® symbols, but any such references are not intended to indicate that we will not assert, to the fullest extent permitted under applicable law, our rights to our trademarks or other intellectual property. All trademarks, service marks and trade names included or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus are the property of their respective owners.

When used in this prospectus, the terms “Deciphera,” “we,” “our” and “us” refer to Deciphera Pharmaceuticals, Inc., a Delaware corporation, and its consolidated subsidiaries, unless otherwise specified or the context otherwise requires.

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement that we have filed with the Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act.

Under this process, we may sell the securities described in this prospectus in one or more offerings. This prospectus describes the general manner in which we may offer the securities described in this prospectus. Each time we sell securities pursuant to the registration statement we will provide a prospectus supplement that will contain specific information about the offering and the securities offered, and may also add, update or change information contained in this prospectus. If there is any inconsistency between information in this prospectus and any accompanying prospectus supplement, you should rely on the information in the most recent applicable prospectus supplement and documents incorporated by reference herein and therein. This prospectus may not be used to offer to sell, solicit an offer to buy or consummate a sale of our securities unless it is accompanied by a prospectus supplement.

This prospectus, together with any accompanying prospectus supplement, contains important information you should know before investing in our securities, including important information about us and the securities being offered. You should carefully read both documents, as well as the additional information contained in the documents described under "*Where You Can Find More Information*" and "*Incorporation of Certain Information by Reference*" in both this prospectus and the applicable prospectus supplement, and in particular the annual, quarterly and current reports and other documents we file with the SEC. Neither this prospectus nor any accompanying prospectus supplement is an offer to sell these securities or is soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus and the applicable prospectus supplement. This prospectus and the applicable prospectus supplement do not contain all of the information set forth in the registration statement and its exhibits and schedules in accordance with SEC rules and regulations. For further information with respect to us and the securities being offered by this prospectus and the applicable prospectus supplement, you should read the registration statement, including its exhibits and schedules. Statements contained in this prospectus and the applicable prospectus supplement, including documents that we have incorporated by reference, as to the contents of any contract or other document referred to are not necessarily complete, and, with respect to any contract or other document filed as an exhibit to the registration statement or any other such document, each such statement is qualified in all respects by reference to the corresponding exhibit. You should review the complete contract or other document to evaluate these statements. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database or our website.

We file annual, quarterly and current reports, proxy statements and other documents with the SEC under the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including us, that file electronically with the SEC. You may obtain documents that we file with the SEC at *www.sec.gov*.

We also make these documents available on our website at *deciphera.com*. Our website and the information contained or connected to our website is not incorporated by reference in this prospectus or any prospectus supplement, and you should not consider it part of this prospectus or any prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules permit us to incorporate information by reference in this prospectus and the applicable prospectus supplement. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and the applicable prospectus supplement, except for information superseded by information contained in this prospectus or the applicable prospectus supplement itself or in any subsequently filed incorporated document. This prospectus and the applicable prospectus supplement incorporate by reference the documents set forth below that we have previously filed with the SEC, other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about us and our business and financial condition.

- Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on March 14, 2019;
- Quarterly Reports on Form 10-Q for the periods ended March 31, 2019, filed with the SEC on May 9, 2019, June 30, 2019, filed with the SEC on August 2, 2019, and September 30, 2019, filed with the SEC on November 4, 2019;
- Current Reports on Form 8-K, filed with the SEC on February 22, 2019, March 4, 2019, May 3, 2019, June 11, 2019, June 13, 2019, July 8, 2019, August 13, 2019, August 15, 2019, November 26, 2019, December 4, 2019 and December 16, 2019 (to the extent the information in such report is filed and not furnished);
- Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 22, 2019, to the extent incorporated by reference into Part III of the Annual Report on Form 10-K for the fiscal year ended December 31, 2018; and
- the description of our Common Stock contained in our Registration Statement on Form 8/A, dated September 27, 2017, including any amendments or reports filed for the purpose of updating such description.

All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, and any previously filed documents. All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and prior to the termination of the offering of any of the securities covered under this prospectus shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, the applicable prospectus supplement and any previously filed documents.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference in this prospectus or the applicable prospectus supplement shall be deemed to be modified or superseded for purposes of this prospectus and such applicable prospectus supplement to the extent that a statement contained in this prospectus or such applicable prospectus supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus and such applicable prospectus supplement, modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or such applicable prospectus supplement.

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus and the applicable prospectus supplement.

Prospective investors may obtain documents incorporated by reference in this prospectus and the applicable prospectus supplement at no cost by requesting them in writing or by telephone from us at our executive offices at:

Deciphera Pharmaceuticals, Inc.
200 Smith Street
Waltham, MA 02451
(781) 209-6400
Attention: Secretary

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, together with any accompanying prospectus supplement, includes and incorporates by reference "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and releases issued by the SEC and within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. All statements other than statements of historical facts contained in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plan, objectives of management and expected market growth, are forward-looking statements. You can identify these forward-looking statements by the use of words such as "outlook," "believes," "expects," "potential," "continues," "may," "will," "should," "seeks," "approximately," "predicts," "intends," "plans," "estimates," "anticipates" or the negative version of these words or other comparable words. Such forward-looking statements are subject to various risks and uncertainties. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. We believe these factors include, but are not limited to, those described under "*Risk Factors*" and include, among other things:

- the success, cost and timing of our product development activities and clinical trials, including the timing of our ongoing Phase 3 trial and results therefrom;
- our ability to obtain and maintain regulatory approval for ripretinib (DCC-2618) or any of our other current or future drug candidates, and any related restrictions, limitations and/or warnings in the label of an approved drug candidate;
- our expectations regarding the size of target patient populations for our drug candidates, if approved for commercial use, and any additional drug candidates we may develop;
- our ability to obtain funding for our operations;
- our ability to manufacture or obtain sufficient quantities of our drug candidates, including, without limitation, ripretinib, on a timely basis, to support our planned clinical trials and, if approved, commercialization;
- our commercial preparedness efforts and our ability to be ready for commercial launch upon approval of a drug candidate, including, without limitation, ripretinib;
- the commercialization of our drug candidates, if approved;
- our plans to research, develop and commercialize our drug candidates, including the timing of our ongoing Phase 3 trial and the timing of investigational new drug, or IND, applications, including, without limitation, the success of IND-enabling studies for, and the expected timing of, an IND application for our DCC-3116 program;
- the performance and experience of our licensee, Zai Lab (Shanghai) Co., Ltd., or Zai, to successfully develop and, if approved, commercialize ripretinib in Greater China under the terms and conditions of our license agreement;
- our ability to attract additional licensees and/or collaborators with development, regulatory and commercialization expertise;
- our expectations regarding our ability to obtain, maintain, enforce and defend our intellectual property protection for our drug candidates;
- future agreements with third parties in connection with the commercialization of ripretinib or any of our other current or future drug candidates;
- the size and growth potential of the markets for our drug candidates and our ability to serve those markets;
- the rate and degree of market acceptance of our drug candidates as well as the reimbursement coverage for our drug candidates, and the extent to which patient assistance programs are utilized;

- regulatory and legal developments in the United States and foreign countries;
- the performance and experience of our third-party suppliers and manufacturers;
- the success and timing of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- the benefits of U.S. Food and Drug Administration, or FDA, designations such as Fast Track and Breakthrough Therapy or Priority Review, and review of our New Drug Application, or NDA, under the FDA's Real-Time Oncology Review and Project Orbis pilot programs;
- the timing or likelihood of approval of our NDA submission to the FDA, our New Drug Submission with Health Canada, or our market authorisation application with the Therapeutic Goods Administration in Australia, for ripretinib and potential regulatory approval for and commercial launch of ripretinib in these jurisdictions;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act; and
- our use of the proceeds from our initial public offering and our follow-on public offerings and any other financing transaction we may undertake.

These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In evaluating such forward-looking statements, you should specifically consider various factors that may cause actual results to differ materially from current expectations, including the risks outlined under the heading "Risk Factors" contained in this prospectus and any related free writing prospectus, and in any other documents incorporated herein or therein (including in our most recent annual report on Form 10-K, subsequent quarterly reports on Form 10-Q and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act). Any forward-looking statement in this prospectus reflects our current view with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, industry and future growth. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This prospectus, together with any accompanying prospectus supplement, also contains estimates, projections and other information concerning our industry, our business and the markets for certain drugs, including data regarding the estimated size of those markets, their projected growth rates and the incidence of certain medical conditions. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained these industry, business, market and other data from reports, research surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which these data are derived.

Trademarks

This prospectus includes trademarks, service marks and trade names owned by us or by other companies. All trademarks, service marks and trade names included in this prospectus are the property of their respective owners.

ABOUT THE COMPANY

The following highlights information about the Registrant and our business contained elsewhere or incorporated by reference in this prospectus. It is not complete and does not contain all of the information that you should consider before investing in any of our securities. You should carefully read this prospectus together with the more detailed information incorporated by reference in this prospectus.

Overview

Deciphera Pharmaceuticals, Inc. ("we", "us," "our," "the Company," or "Deciphera") is a clinical-stage biopharmaceutical company developing new drugs to improve the lives of cancer patients by addressing key mechanisms of drug resistance that limit the rate and durability of response of many cancer therapies. Our targeted, small molecule drug candidates, designed using our proprietary kinase switch control inhibitor platform, inhibit the activation of kinases, an important family of enzymes, that when mutated or over expressed, are known to be directly involved in the growth and spread of many cancers. We have built a diverse pipeline of orally administered drug candidates that includes three clinical-stage, one preclinical-stage, and one research-stage program. We wholly own all of our drug candidates with the exception of a development and commercialization out-license agreement for ripretinib in the Greater China region.

Deciphera Pharmaceuticals, LLC was formed and commenced operations in 2003. Deciphera Pharmaceuticals, Inc. was incorporated under the laws of Delaware on August 1, 2017 for the sole purpose of completing an initial public offering and related transactions in order to carry on the business of Deciphera Pharmaceuticals, LLC. We are the sole managing member of Deciphera Pharmaceuticals, LLC and conduct all our business through, operate and control all of the businesses and affairs of Deciphera Pharmaceuticals, LLC, our wholly owned subsidiary, directly or through blocker entities that are also wholly owned by us.

On October 2, 2017, we completed the initial public offering of our common stock, or IPO. On October 2, 2017, immediately prior to the completion of the IPO, we engaged in a series of transactions whereby Deciphera Pharmaceuticals, LLC became a wholly owned subsidiary of Deciphera Pharmaceuticals, Inc., a Delaware corporation. As part of the transactions, shareholders of Deciphera Pharmaceuticals, LLC exchanged their shares of Deciphera Pharmaceuticals, LLC for shares of Deciphera Pharmaceuticals, Inc. on a one-for-5.65 basis.

Our principal executive offices are located at 200 Smith Street, Waltham, MA 02451, and our telephone number is (781) 209-6400. Our corporate website address is *deciphera.com*. Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on any such information in making your decision whether to purchase our securities.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available, free of charge, on or through our website as soon as reasonably practicable after such reports and amendments are electronically filed with or furnished to the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings at *www.sec.gov*.

For additional information about our Company, please refer to other documents we have filed with the SEC and that are incorporated by reference into this prospectus, as listed under the heading "*Incorporation of Certain Information by Reference*."

RISK FACTORS

Investing in our securities involves certain risks. Before you invest in any of our debt securities, common stock, preferred stock or warrants, in addition to the other information included in, or incorporated by reference into, this prospectus, you should carefully consider the risk factors contained in Item 1A under the caption "*Risk Factors*" and elsewhere in our annual report on Form 10-K for the fiscal year ended December 31, 2018, which is incorporated into this prospectus by reference, as updated by our annual or quarterly reports for subsequent fiscal years or fiscal quarters that we file with the SEC and that are so incorporated. See "*Where You Can Find More Information*" for information about how to obtain a copy of these documents. You should also carefully consider the risks and other information that may be contained in, or incorporated by reference into, any prospectus supplement relating to specific offerings of securities.

USE OF PROCEEDS

Unless otherwise described in the applicable prospectus supplement, we intend to use the net proceeds from the sale of any securities described in this prospectus for general corporate purposes, which may include research and development and clinical development costs to support the advancement of our drug candidates, including the continued growth of our commercial and medical affairs capabilities, the conduct of clinical trials and preclinical research and development activities; working capital; capital expenditures; general and administrative expenses; and other general corporate purposes.

We may set forth additional information concerning our expected use of net proceeds from sales of securities in the applicable prospectus supplement relating to the specific offering. Pending use of net proceeds as described above, we may temporarily invest the net proceeds in a variety of capital preservation instruments, including high quality, investment grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government, or may hold such proceeds as cash, until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will solely be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

GENERAL DESCRIPTION OF SECURITIES

We may offer shares of common or preferred stock, various series of senior or subordinated debt securities, warrants, or units consisting of combinations of the foregoing, in each case from time to time under this prospectus, together with the applicable prospectus supplement, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. At the time we offer a particular type or series of securities, we will provide an applicable prospectus supplement describing the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- voting or other rights;
- rates and times of payment of interest, dividends or other payments;
- liquidation preference;
- original issue discount;
- maturity;
- ranking;
- restrictive covenants;
- redemption, conversion, exercise, exchange, settlement or sinking fund terms, including prices or rates, and any provisions for changes to or adjustments in such prices or rates and in the securities or other property receivable upon conversion, exercise, exchange or settlement;
- any securities exchange or market listing arrangements; and
- important U.S. federal income tax considerations.

This prospectus may not be used to offer or sell securities unless accompanied by an applicable prospectus supplement. The applicable prospectus supplement may add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. You should read the prospectus supplement related to any securities being offered.

We may sell the securities directly to or through underwriters, dealers or agents. We and our underwriters, dealers or agents reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement (i) the names of the underwriters or agents and applicable fees, discounts and commissions to be paid to them; (ii) details regarding over-allotment options, if any; and (iii) net proceeds to us.

The following descriptions are not complete and may not contain all the information you should consider before investing in any securities we may offer hereunder; they are summarized from, and qualified by reference to, our amended and restated certificate of incorporation, amended and restated bylaws and the other documents referred to in the descriptions, all of which are or will be publicly filed with the SEC, as applicable. See "*Where You Can Find More Information*."

DESCRIPTION OF CAPITAL STOCK

The following summary description of our common stock and preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of our capital stock. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus forms a part, and by applicable law. The terms of our common stock and preferred stock may also be affected by Delaware law.

Authorized Capital Stock

Our authorized capital stock consists of 125,000,000 shares of common stock, par value $0.01 per share, and 5,000,000 shares of preferred stock, par value $0.01 per share, all of which preferred stock is undesignated. As of September 30, 2019, we had 51,043,912 shares of our common stock outstanding and no shares of preferred stock outstanding. Unless our board of directors determines otherwise, we will issue all shares of our capital stock in uncertified form.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. When we issue shares of common stock under this prospectus, when issued and paid for, the shares will validly issued, fully paid and non-assessable.

Exchange Listing

Our common stock is listed on The Nasdaq Global Select Market under the symbol “DCPH.” On February 10, 2020, the closing price for our common stock, as reported on The Nasdaq Global Select Market, was $69.32 per share. As of September 30, 2019, we had approximately five stockholders of record.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar’s address is 250 Royall Street, Canton, Massachusetts 02021.

Preferred Stock

Undesignated Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or

other corporate action. We have no shares of preferred stock outstanding, and we have no present plan to issue any shares of preferred stock.

The purpose of authorizing our board of directors to issue preferred stock in one or more series and determine the number of shares in the series and its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. Examples of rights and preferences that the board of directors may fix are:

- dividend rights;
- dividend rates;
- conversion rights;
- voting rights;
- terms of redemption; and
- liquidation preferences.

The existence of authorized but unissued shares of undesignated preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer, stockholder or stockholder group. The rights of holders of our common stock described above, will be subject to, and may be adversely affected by, the rights of any preferred stock that we may designate and issue in the future. The issuance of shares of undesignated preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Additional Series of Preferred Stock

We will incorporate by reference as an exhibit to the registration statement, which includes this prospectus, the form of any certificate of designation that describes the terms of any additional series of preferred stock we may offer pursuant to this prospectus. This description and the applicable prospectus supplement will include:

- the title and stated value;
- the number of shares authorized;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date, and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;

- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

When we issue shares of preferred stock under this prospectus, the shares will fully be paid and nonassessable and will not be subject to any preemptive or similar rights.

Registration Rights

The holders of approximately 27,262,799 shares of our common stock, or their transferees, are entitled to the registration rights set forth below with respect to registration of the resale of such shares under the Securities Act pursuant to the registration rights agreement, by and among us and certain of our stockholders.

Demand Registration Rights

Upon the written request of at least 40% of the holders of the registrable securities then outstanding, or a lesser percentage in certain cases, that we file a registration statement under the Securities Act covering the registration of registrable securities owned by such holder(s) having an anticipated aggregate offering price, net of selling expenses, of at least $25.0 million, we will be obligated to notify all holders of registrable securities of such request. As soon as practicable thereafter, and in any event within 60 days after the date such request is given, we will be required to register the sale on a registration statement on Form S-1 of all registrable securities that holders may request to be registered, subject to specified exceptions, conditions and limitations. We may postpone the filing of a registration statement for up to 90 days once in any 12-month period if in the good faith judgment of our board of directors such registration would be detrimental to us, and we are not required to effect the filing of a registration statement during the period starting with the date that is 60 days prior to our good faith estimate of the date of filing of a registration statement initiated by us and ending on a date 180 days, in the case of our initial public offering, or 90 days, in all other cases, after the effective date of a registration statement initiated by us. We are required to effect only three registrations pursuant to this provision. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement.

"Piggyback" Registration Rights

If we register any securities for public sale, holders of registration rights will have the right to include their shares in the registration statement. The underwriters of any underwritten offering will have the right to limit the

number of registrable securities to be included in the registration statement, but such number may not be below 20% of the total number of shares included in such registration statement.

Form S-3 Registration Rights

If we are eligible to file a registration statement on Form S-3, holders of at least 10% of our registrable securities then outstanding, or a lesser percentage in certain cases, have the right to request that we file a registration statement on Form S-3, so long as the aggregate price to the public of the securities to be sold under the registration statement on Form S-3 is at least $5.0 million. As soon as practicable thereafter, and in any event within 45 days after the date such request is given, we will be required to register the sale on a registration statement on Form S-3 of all registrable securities that holders may request to be registered, subject to specified exceptions, conditions and limitations. We may postpone the filing of a registration statement for up to 90 days once in any 12-month period if in the good faith judgment of our board of directors such registration would be detrimental to us, and we are not required to effect the filing of a registration statement during the period starting with the date that is 30 days prior to our good faith estimate of the date of filing of a registration statement initiated by us and ending on a date 90 days after the effective date of a registration statement initiated by us. We are required to effect only two registrations in any 12-month period. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement.

Expenses of Registration

Pursuant to the registration rights agreement, we are generally required to bear all registration expenses, including the fees and expenses of one counsel representing the selling holders, incurred in connection with the demand, piggyback and Form S-3 registrations described above. We are not required to bear selling expenses, which include all underwriting discounts and commissions, selling commissions, stock transfer taxes applicable to the sale of registrable securities, and fees and disbursements of any additional counsel for any selling holder. We are not required to pay registration expenses if the registration request is withdrawn at the request of the holders of a majority of the registrable securities unless (i) the holders of a majority of the registrable securities agree to forfeit their right to one registration, or (ii) the withdrawal is due to the discovery of a material adverse change in our business.

Termination of Registration Rights

The demand, piggyback and Form S-3 registration rights discussed above will terminate as to a given holder of registrable securities upon the earlier of (i) three years following the date of closing of our initial public offering, except with respect to shares held by certain principal investors whose registration rights shall not terminate until any such principal investor first holds less than one percent of our outstanding capital stock, (ii) the closing of a change of control or (iii) when all shares held by the holders can be sold under SEC Rule 144 within a 90-day period.

Authorized but Unissued Capital Stock

The Delaware General Corporation Law does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of Nasdaq, which would apply so long as our common stock remains listed on Nasdaq, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. These additional shares may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our company by means of a merger, tender offer,

proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws and Delaware Anti-Takeover Law

Certain provisions of the Delaware General Corporation Law and of our amended and restated certificate of incorporation and amended and restated bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our board of directors. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Provisions of our Certificate of Incorporation and Bylaws. Our amended and restated certificate of incorporation and amended and restated bylaws include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board Composition and Filling Vacancies. Our amended and restated certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

No Written Consent of Stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of Stockholders. Our amended and restated certificate of incorporation and amended and restated bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements. Our amended and restated bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken.

Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our amended and restated bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to Certificate of Incorporation and Bylaws. Any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our bylaws and certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated Preferred Stock. Our amended and restated certificate of incorporation provides for 5,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Delaware Anti-Takeover Law. We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Exclusive Jurisdiction of Certain Actions. Our amended and restated bylaws provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers and employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar exclusive forum provisions in other corporation's bylaws has been challenged in legal proceedings, and it is possible that a court could rule that this provision in our amended and restated bylaws is inapplicable or unenforceable.

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of our debt securities that we may issue from time to time. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, the applicable prospectus supplement or free writing prospectus will describe the specific terms of any debt securities offered through that prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the terms we describe below. Unless the context requires otherwise, whenever we refer to the "indentures," we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term "trustee" to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability or the ability of our subsidiaries to:
  - incur additional indebtedness;
  - issue additional securities;
  - create liens;
  - pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;
  - redeem capital stock;
  - place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
  - make investments or other restricted payments;
  - sell or otherwise dispose of assets;
  - enter into sale-leaseback transactions;
  - engage in transactions with stockholders or affiliates;
  - issue or sell stock of our subsidiaries;
  - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of $1,000 and any integral multiple thereof;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and

- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;
- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under "*Description of Debt Securities-Consolidation, Merger or Sale*;"
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under "*Description of Debt Securities-General*," to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or as otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement or free writing prospectus, in denominations of $1,000

and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement or free writing prospectus with respect to that series. At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement or free writing prospectus, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement or free writing prospectus, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement or free writing prospectus the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series. If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement or

free writing prospectus, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement or free writing prospectus any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking of Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement or free writing prospectus. The subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

The senior debt securities will rank equally in right of payment to all our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under "*Description of Capital Stock*," "*Description of Debt Securities*" and "*Description of Warrants*" will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

Issuance in Series

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement.

Unit Agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

Modification without Consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Modification with Consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit Agreements Will Not Be Qualified under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or

sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing Law

The unit agreements and the units will be governed by New York law.

Form, Exchange and Transfer

We will issue each unit in global-i.e., book-entry-form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement

PLAN OF DISTRIBUTION

We may sell the offered securities in and outside the United States (1) through underwriters or dealers, (2) directly to one or more purchasers, including to a limited number of institutional purchasers, to a single purchaser or to our affiliates and stockholders, (3) through agents or (4) through a combination of any of these methods.

If underwriters or dealers are used in the sale, the securities will be acquired by the underwriters or dealers for their own account and may be resold from time to time in one or more transactions, including:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- in "at-the-market offerings," within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- through a market maker or into an existing trading market on an exchange or otherwise;
- at prices related to those prevailing market prices; or
- at negotiated prices.

The applicable prospectus supplement will set forth the following information to the extent applicable:

- the terms of the offering;
- the names of any underwriters, dealers or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any commissions paid to agents.

Sale through Underwriters or Dealers

If any securities are offered through underwriters, the underwriters will acquire the securities for their own account and may resell them from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer and sell securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise provided in the applicable prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all of the offered securities if they purchase any of them. In connection with the sale of securities, underwriters may be deemed to have received compensation from us in the form of underwriting discounts or commissions and dealers may receive compensation from the underwriters in the form of discounts or concessions. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

In order to facilitate the offering of securities, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. Specifically, the underwriters may overallot in connection

with the offering, creating a short position in the securities for their account. In addition, to cover overallotments or to stabilize the price of the shares, the underwriters may bid for, and purchase, shares in the open market. Finally, an underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed shares in transactions to cover syndicate short positions, in stabilization transactions, or otherwise. Any of these activities may stabilize or maintain the market price of the offered securities above independent market levels. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities offered pursuant to this prospectus.

If any securities are offered through dealers, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale.

Direct Sales and Sales through Agents

We may sell the securities directly to purchasers. If the securities are sold directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities, we will describe the terms of any such sales in the applicable prospectus supplement. We may also sell the securities through agents designated from time to time. Sales may be made by means of ordinary brokers' transactions on The Nasdaq Global Select Market at market prices, in block transactions and such other transactions as agreed by us and any agent. In the applicable prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless otherwise provided in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

At-the-Market Offerings

To the extent that we make sales through one or more underwriters or agents in at-the-market offerings, we will do so pursuant to the terms of a sales agency financing agreement or other at-the-market offering arrangement between us, on one hand, and the underwriters or agents, on the other. If we engage in at-the-market sales pursuant to any such agreement, we will issue and sell our securities through one or more underwriters or agents, which may act on an agency basis or a principal basis. During the term of any such agreement, we may sell securities on a daily basis in exchange transactions or otherwise as we agree with the underwriters or agents. Any such agreement will provide that any securities sold will be sold at prices related to the then prevailing market prices for our securities. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined at this time. Pursuant to the terms of the agreement, we may agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase blocks of our common stock or other securities. The terms of any such agreement will be set forth in more detail in the applicable prospectus supplement.

Remarketing Arrangements

Offered securities may also be offered and sold, if we so indicate in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as our agents. Any remarketing firm will be identified and the terms of its agreements, if any, with us and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters of the offered securities under the Securities Act.

Delayed Delivery Contracts

If we so indicate in the applicable prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers by certain institutions to purchase securities from us pursuant to contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement will describe the conditions to those contracts and the commission payable for solicitation of those contracts.

General Information

We may have agreements with the agents, dealers, underwriters and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers or underwriters may be required to make. Agents, dealers, underwriters and remarketing firms may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

Each underwriter, dealer and agent participating in the distribution of any of the securities that are issuable in bearer form will agree that it will not offer, sell or deliver, directly or indirectly, securities in bearer form in the United States or to United States persons, other than qualifying financial institutions, during the restricted period, as defined in United States Treasury Regulations Section 1.163-5(c)(2)(i)(D)(7).

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Any underwriters will also be advised about the validity of the securities and other legal matters by their own counsel, which will be named in the prospectus supplement.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2018 have been so incorporated in reliance on the report (which contains an emphasis of matter relating to the Company’s requirement for additional financing to fund future operations) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Table of Contents

3,181,818 shares

Common stock

Prospectus supplement

J.P. Morgan **Piper Sandler** **Jefferies**

Lead Manager:

Guggenheim Securities

Co-Manager:

SunTrust Robinson Humphrey

February 13, 2020