

---

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

---

**FORM S-3  
REGISTRATION STATEMENT**  
*UNDER  
THE SECURITIES ACT OF 1933*

---

**DELCATH SYSTEMS, INC.**

(Exact Name Of Registrant As Specified In Its Charter)

---

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**06-1245881**  
(I.R.S. Employer  
Identification No.)

**1633 Broadway, Suite 22C  
New York, New York 10019  
(212) 489-2100**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

---

**Gerard Michel  
Chief Executive Officer  
Delcath Systems, Inc.  
1633 Broadway, Suite 22C  
New York, New York 10019  
(212) 489-2100**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

---

**Copy to:**

**Veronica Montagna, Esq.  
McCarter & English, LLP  
100 Mulberry Street, Four Gateway Center  
Newark, New Jersey 07102  
(973) 639-7948**

---

**Approximate date of commencement of proposed sale to the public:** From time to time after the effective date of this registration statement as determined by the selling securityholders.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

<b>Title of Securities to be Registered</b>	<b>Amount to be registered (1)</b>	<b>Proposed maximum offering price per unit (2)</b>	<b>Proposed   Maximum Aggregate Offering Price (2)</b>	<b>Amount of Registration Fee (3)</b>
Common Stock, par value \$0.01, issuable upon the conversion of Series E Convertible Preferred Stock following the conversion of 8% senior secured promissory notes into Series E Convertible Preferred Stock by the selling securityholders named in the prospectus contained herein and any supplements thereto	237,614	\$10.32	\$2,452,176.48	\$227.32
Common Stock, par value \$0.01, issuable upon the conversion of up to \$3 million principal amount of a loan made to the registrant by the selling securityholder named in the prospectus contained herein and any supplements thereto	250,417	\$10.32	\$2,584,303.44	\$239.56
Common Stock, par value \$0.01, issuable upon the exercise of a Warrant issued to the selling securityholder named in the prospectus contained herein and any supplements thereto	127,755	\$10.32	\$1,318,431.60	\$122.22
Common Stock, par value \$0.01, held by selling securityholders named in the prospectus contained herein and any supplements thereto	22,413	\$10.32	\$231,302.16	\$21.44
<b>Total</b>	<b>638,199</b>	<b>\$10.32</b>	<b>\$6,586,213.68</b>	<b>\$610.54</b>

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares of the registrant's common stock, par value \$0.01 (the "Common Stock"), being registered hereunder include such indeterminate number of additional shares of Common Stock as may be issuable as a result of stock splits, stock dividends or similar transactions with respect to the shares being registered hereunder.
- (2) Estimated in accordance with Rule 457(c) under the Securities Act solely for the purpose of calculating the registration fee, based on the average of the high and low prices of shares of the Common Stock on September 29, 2021, a date within five business days prior to the filing of this registration statement.
- (3) The registration fee is calculated by multiplying the maximum aggregate offering price of all securities being registered hereunder by 0.0000927.

**The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

**The information in this prospectus is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold until the registration statement is effective. This prospectus is not an offer to sell these securities, and we are not soliciting offers to buy these securities, in any state or other jurisdiction where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, PRELIMINARY PROSPECTUS DATED OCTOBER 6, 2021**



## **Up to 638,199 Shares of Common Stock Offered by the Selling Stockholders**

This prospectus relates to the offer and resale, from time to time, by the selling stockholders named under the heading “Selling Stockholders” in this prospectus, or their assigns (the “Selling Stockholders”), of up to an aggregate of 638,199 shares of our common stock, par value \$0.01 per share (“Common Stock”), consisting of (a) up to 237,614 shares of Common Stock that may be issued to Selling Stockholders upon the conversion of up to an aggregate of 2,376.14 shares of our Series E Convertible Preferred Stock, par value \$0.01 per share (the “Series E Preferred Stock”), at a conversion price of \$1,198 per share, following an election by such Selling Stockholders to convert the principal amount of, and all interest accruing under, 8% senior secured promissory notes issued by us to such Selling Stockholders (the principal of which is \$2 million and accrued interest of up to \$846,667 which as of October 5, 2021 is \$344,556) into shares of Series E Preferred Stock, (b) up to an aggregate of 378,172 shares of Common Stock that may be issued to a Selling Stockholder, consisting of (i) 250,417 shares of Common Stock that may be issued to such Selling Stockholder upon the conversion of up to \$3 million principal amount of a loan made to us by such Selling Stockholder (the “Loan”) and (ii) 127,755 shares of Common Stock that may be issued to such Selling Stockholder upon the exercise of a warrant for 127,755 shares of our Common Stock issued to such Selling Stockholder in connection with the Loan at an exercise price of \$0.01 per share (the “Warrant”), and (c) 22,413 shares of Common Stock held by Selling Stockholders, all as described in greater detail under the heading “The Offering” in this prospectus.

Our registration of shares of Common Stock covered by this prospectus does not mean that the Selling Stockholders will offer or sell any such shares. The Selling Stockholders may sell shares of Common Stock covered by this prospectus in a number of different ways and at varying prices. For additional information on the possible methods of sale that may be used by the Selling Stockholders, you should refer to the section of this prospectus entitled “Plan of Distribution.” The Selling Stockholders may, individually but not severally, be deemed to be an “underwriter” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), of the shares of Common Stock that they are offering pursuant to this prospectus. The Selling Stockholders will bear all commissions and discounts, if any, attributable to their respective sales of Common Stock hereunder. We will bear all costs, expenses and fees in connection with the registration of the Common Stock. We will not be paying any underwriting discounts or commissions in this offering.

We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder. However, assuming (i) the conversion of all of the Series E Preferred Stock following an election to convert the principal amount and all accrued interest under the 8% senior secured promissory notes into such shares, (ii) the conversion of the entire convertible portion of the Loan and (iii) the exercise of the Warrant, we will receive, upon issuance of the Common Stock to the Selling Stockholders \$1,278 upon exercise of the Warrant, the outstanding principal amount of the Loan will be reduced by \$3 million and the 8% senior secured promissory notes will no longer be outstanding. See “The Offering” and “Use of Proceeds” for more details.

A prospectus supplement may add, update, or change information contained in this prospectus. You should carefully read this prospectus, any applicable prospectus supplement, and the information incorporated by reference in this prospectus and any applicable prospectus supplement before you make your investment decision.

Our Common Stock is traded on The NASDAQ Capital Market under the symbol “DCTH.” On October 4, 2021, the closing price for our Common Stock, as reported on The NASDAQ Capital Market, was \$9.58 per share. Our principal executive offices are located at 1633 Broadway, Suite 22C, New York, New York 10019.

**Investing in our Common Stock involves a high degree of risk. You should read carefully the risks and uncertainties that are described in (i) the “[Risk Factors](#)” section beginning on page 12 of this prospectus, (ii) the “Risk Factors” section of any applicable prospectus supplement or amendment, and (iii) under the “Risk Factors” or similar headings in our periodic reports and other documents filed with the Securities and Exchange Commission (the “SEC”) that are incorporated by reference into this prospectus.**

**Neither the SEC 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.**

The date of this prospectus is \_\_\_\_\_, 2021.

**TABLE OF CONTENTS**

<a href="#">ABOUT THIS PROSPECTUS</a>	1
<a href="#">PROSPECTUS SUMMARY</a>	3
<a href="#">DESCRIPTION OF THE TRANSACTIONS</a>	6
<a href="#">DESCRIPTION OF CAPITAL STOCK</a>	8
<a href="#">THE OFFERING</a>	11
<a href="#">RISK FACTORS</a>	12
<a href="#">CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>	13
<a href="#">USE OF PROCEEDS</a>	14
<a href="#">SELLING STOCKHOLDERS</a>	14
<a href="#">PLAN OF DISTRIBUTION</a>	17
<a href="#">LEGAL MATTERS</a>	19
<a href="#">EXPERTS</a>	19
<a href="#">WHERE YOU CAN FIND MORE INFORMATION AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</a>	19

## ABOUT THIS PROSPECTUS

This prospectus relates to the offer and resale, from time to time, by the selling stockholders named under the heading “Selling Stockholders” in this prospectus, or their assigns (the “Selling Stockholders”), of up to an aggregate of 638,199 shares of our common stock, par value \$0.01 per share (“Common Stock”), consisting of (a) up to 237,614 shares of Common Stock that may be issued to Selling Stockholders upon the conversion of up to an aggregate of 2,376.14 shares of our Series E Convertible Preferred Stock, par value \$0.01 per share (the “Series E Preferred Stock”), at a conversion price of \$1,198 per share, following an election by such Selling Stockholders to convert the principal amount of, and all interest accruing under, 8% senior secured promissory notes issued by us to such Selling Stockholders (the principal of which is \$2 million, and the accrued interest on which as of October 5, 2021 is \$344,556) into shares of Series E Preferred Stock, (b) up to an aggregate of 378,172 shares of Common Stock that may be issued to a Selling Stockholder, consisting of (i) 250,417 shares of Common Stock that may be issued to such Selling Stockholder upon the conversion of up to \$3 million principal amount of a loan made to us by such Selling Stockholder (the “Loan”) and (ii) 127,755 shares of Common Stock that may be issued to Such Selling Stockholder upon the exercise of a warrant for 127,755 shares of our Common Stock issued to such Selling Stockholder in connection with the Loan at an exercise price of \$0.01 per share (the “Warrant”), and (c) 22,413 shares of Common Stock held by Selling Stockholders, all as described in greater detail under the heading “The Offering” in this prospectus.

We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder. However, assuming (i) the conversion of all of the Series E Preferred Stock following an election to convert the principal amount and all accrued interest under the 8% senior secured promissory notes into such shares, (ii) the conversion of the entire convertible portion of the Loan and (iii) the exercise of the Warrant, we will receive, upon issuance of the Common Stock to the Selling Stockholders \$1,278 upon exercise of the Warrant, the outstanding principal amount of the Loan will be reduced by \$3 million and the 8% senior secured promissory notes will be no longer be outstanding. See “The Offering” and “Use of Proceeds” for more details.

This prospectus is part of a registration statement on Form S-3 that we have filed with the Securities and Exchange Commission, or the SEC, using a shelf registration process. Under this registration statement, the Selling Stockholders may sell Common Stock from time to time in one or more offerings described in this prospectus. This prospectus omits some of the information contained in the registration statement, and reference is made to the full registration statement for further information with regard to us, the Selling Stockholders and the securities being offered by the Selling Stockholders.

This prospectus provides you with a description of our Common Stock as well as other information you should know before investing in our Common Stock. Each time the Selling Stockholders offer and sell our Common Stock hereby, we will provide one or more prospectus supplements or amendments that will contain specific information about the terms of that specific offering of our Common Stock and the specific manner in which it may be offered. The prospectus supplement or amendment may also add to, update or change any of the information contained in this prospectus. To the extent that any statement we make in a prospectus supplement or amendment is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the prospectus supplement or amendment. You should read both this prospectus and the applicable prospectus supplement or amendment together with the additional information described under the headings “Where You Can Find More Information” and Incorporation of Certain Information by Reference” before making an investment decision. This prospectus may not be used to sell our Common Stock unless it is accompanied by a prospectus supplement, or this prospectus is otherwise updated by documents incorporated by reference.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed or will be filed or incorporated by reference as exhibits to the registration statement of which this prospectus forms a

---

[Table of Contents](#)

part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information and Incorporation of Certain Information by Reference.” We urge you to read that registration statement in its entirety, including all amendments, exhibits, schedules and supplements to that registration statement.

As used in this prospectus, “Delcath,” “the Company,” “we,” “our,” or “us” mean Delcath Systems, Inc. and its wholly owned subsidiaries. The term “Selling Stockholders” refers, collectively, to the selling stockholders named under the heading “Selling Stockholders” in this prospectus

## PROSPECTUS SUMMARY

This prospectus summary highlights certain information about us and selected information contained elsewhere in or incorporated by reference into this prospectus. This prospectus summary is not complete and does not contain all of the information that you should consider before making an investment decision. For a more complete understanding of the Company, you should read and consider carefully the more detailed information included or incorporated by reference in this prospectus and any applicable prospectus supplement or amendment, including the factors described under the heading “Risk Factors,” beginning on page 12 of this prospectus, as well as the information incorporated herein by reference, before making an investment decision.

### Overview of the Company

We are an interventional oncology company focused on the treatment of primary and metastatic liver cancers. Our lead product candidate, the HEPZATO™ KIT (melphalan hydrochloride for injection/hepatic delivery system), or HEPZATO™, is a drug/device combination product. HEPZATO is designed to administer high-dose chemotherapy to the liver while controlling systemic exposure and associated side effects. HEPZATO has not been approved for sale in the United States. In Europe, our commercial product is a stand-alone medical device having the same device components as the HEPZATO KIT but without the melphalan hydrochloride. The device is approved for sale under the trade name CHEMOSAT® Hepatic Delivery System for Melphalan, or CHEMOSAT, where it has been used at major medical centers to treat a wide range of cancers of the liver.

In the United States, HEPZATO is regulated as a combination drug and device by the United States Food and Drug Administration, or the FDA. Primary jurisdiction for regulation of HEPZATO has been assigned to the FDA’s Center for Drug Evaluation and Research. The FDA has granted the active moiety melphalan hydrochloride five orphan drug designations for the treatment of patients with ocular (uveal) melanoma, cutaneous melanoma, hepatocellular carcinoma, intrahepatic cholangiocarcinoma, and neuroendocrine tumors. The FDA has granted the active moiety doxorubicin one orphan drug designation for the treatment of patients with hepatocellular carcinoma. In Europe, CHEMOSAT is regulated as a Class IIb medical device and received its CE Mark in 2012. We are commercializing CHEMOSAT in select markets in the United Kingdom and the European Union, or the EU, where we believe the prospect of securing reimbursement coverage for the use of CHEMOSAT is strongest.

Our most advanced development program is for the use of HEPZATO in the treatment of ocular melanoma liver metastases, or mOM, a type of primary liver cancer. HEPZATO is being studied in the FOCUS Clinical Trial for Patients with Hepatic Dominant Ocular Melanoma, or the FOCUS Trial, which is a global registration clinical trial that is investigating objective response rate in mOM. The FOCUS Trial is being conducted at approximately 30 sites in the United States and Europe. The FOCUS Trial initiated treatment on the final enrolled patient on October 2, 2020. The primary endpoint of the FOCUS Trial is Objective Response Rate, or ORR, as measured by RECISTv1.1, in the Intent to Treat (ITT) population. The single arm trial was powered to demonstrate a superior ORR versus checkpoint inhibitors, one of the few mOM treatment categories with a significant amount of peer reviewed publications. The checkpoint inhibitor ORR was calculated based on a meta-analysis covering 16 different publications which included 476 patients. The pooled overall response rate was 5.5% [95% CI: 3.6, 8.3]. To achieve statistical significance at a 95% Confidence Interval, the lower bound of the ORR for HEPZATO is required to exceed the 8.3% upper bound of the meta-analysis. Secondary endpoints include Duration of Response, or DOR, Disease Control Rate, or DCR, Overall Survival, or OS, and Progression-Free Survival, or PFS. Additional exploratory outcome measures include time to objective response, hepatic progression-free survival, hepatic objective response, and quality of life, safety, and other pharmacokinetic measures. Initially, the trial was a randomized controlled trial which was amended to a single arm trial given slow enrollment due to the rarity of ocular melanoma, absence of crossover to the experimental trial arm, competing clinical trials and the commercial availability of CHEMOSAT in Europe. Included in the pre-specified analyses are comparisons against the Best Alternative Care, or BAC, arm which enrolled 32 patients prior to the amendment to a single-arm trial.

## [Table of Contents](#)

We have paused a global Phase 3 clinical trial of HEPZATO in patients with intrahepatic cholangiocarcinoma, or the ALIGN Trial, due to difficulties in enrollment. In addition to the FOCUS Trial and the ALIGN Trial, our commercial development plan also includes a registry for CHEMOSAT cases performed in Europe and support of select investigator-initiated trials, or IITs.

We are currently reviewing the incidence, unmet need, available efficacy data and development requirements for a broad set of liver cancers in order to select a portfolio of indications which will maximize the value of the HEPZATO platform. This may result in a restart of the ALIGN Trial. We believe that the disease states we are investigating and intend to investigate are unmet medical needs that represent significant market opportunities.

### **Recent Developments**

**The Focus Trial Preliminary Analysis.** On March 31, 2021, Delcath released a preliminary analysis of the FOCUS trial data based on 87% of enrolled patients using prespecified analyses. An Independent Review Committee assessed an ORR of 29.2% [95% CI: 20.1, 39.8] in the ITT population, the lower bound of which exceeded the upper bound of the predefined success criteria (8.3%) for the primary ORR endpoint. In the per protocol populations, evaluable patients in the HEPZATO arm had a statistically significant improvement over BAC in prespecified endpoints including: ORR of 32.9% [95% CI: 22.8, 44.4] versus 13.8% [CI: 3.9, 31.7] for the BAC arm (Chi-square  $P < 0.05$ ), Median PFS of 9.0 months [95% CI: 6.2, 11.8] versus 3.1 months ([95% CI: 2.7, 5.7] for the BAC arm (HR=0.41  $p < 0.001$ ), and DCR of 70.9% [95% CI: 59.6, 80.6] versus 37.9% [95% CI: 20.7, 57.7] for the BAC arm ( $p < 0.002$ ). In this preliminary analysis, DOR and OS were not yet evaluable. Since not all patients were evaluable for all time points, these preliminary analyses may change as data matures.

In the HEPZATO safety population of 94 patients, 38 patients (40.4%) experienced a treatment-emergent serious adverse event. The most commonly reported treatment-emergent serious adverse events were thrombocytopenia (14.9% of patients), neutropenia (10.6% of patients), and leukopenia (4.2% of patients), which were well-manageable. 5% of patients experienced treatment-emergent serious cardiac adverse events. In all cases the events resolved with no ongoing complications. There were no treatment-related deaths in the trial.

**Impact of COVID-19.** The global outbreak of SARS-CoV-2, a novel strain of coronavirus that causes coronavirus disease (“COVID-19”), has adversely impacted certain areas of the Company’s business. These impacts included a slowing of patient recruitment in the FOCUS Trial and a reduction in the pace at which we can monitor data at our clinical trial sites. The resulting delay in completing enrollment and additional time required to monitor data caused our announcement for the top-line data from our FOCUS Trial to shift to early 2021 and to be modified to a preliminary analysis. We intend to submit a New Drug Application (“NDA”) to the FDA in the first quarter of 2022 for the treatment of mOM once the FOCUS Trial has been completed. The ability to achieve this goal is contingent on our ability to monitor data at our clinical sites and, therefore, the timeline may shift as access to the clinical sites changes in response to the rapidly evolving situation. COVID-19 has also caused us to experience an increase in volatility in EU commercial product revenue. The results of the FOCUS Trial should also support securing reimbursement coverage for the use of CHEMOSAT in Europe. Additional impacts of COVID-19 on our business may arise that we are not aware of currently. The ultimate impact of the pandemic on the Company’s results of operations, financial position, liquidity, or capital resources cannot be reasonably estimated at this time.

**Medical Device Directive Transition to Medical Device Regulation.** The European Commission recently reviewed the Medical Device Directive legislative framework and promulgated REGULATION (EU) 2017/745 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC. This new Medical Device Regulation became effective on May 25, 2017, marking the start of a 3-year transition period for manufacturers selling medical devices in Europe to comply with the new medical device regulation, or MDR, which governs all facets of medical devices. The transition task is highly complex and touches every aspect of product development, manufacturing production, distribution, and post marketing evaluation. As a result of the worldwide COVID-19 pandemic, on April 17, 2020, the European



---

## [Table of Contents](#)

Parliament adopted the European Commission's proposal to postpone the implementation of the MDR (EU) 2017/745 by 12 months. This urgently drafted proposal to delay the MDR is in response to the exceptional circumstances associated with the COVID-19 pandemic and the potential impact it may have had on the MDR implementation. The new Date of Application (DoA) for the MDR was May 26, 2021.

Effectively addressing these changes will require a complete review of our device operations to determine what is necessary to comply. We do not believe the MDR regulatory changes will impact our business at this time, though implementation of the medical device legislation may adversely affect our business, financial condition and results of operations or restrict our operations.

Due to COVID-related delays experienced by the medical device industry and Notified Bodies (NB) alike, Delcath has not yet achieved MDR certification. However, our current CE Mark under the Medical Device Directive remains effective until April 2024 and allows us to fully operate, in Europe, accordingly, as Delcath and our Notified Body work closely together through the certification process.

### **Corporate Information**

We were incorporated in the State of Delaware in August 1988. Our principal executive offices are located at 1633 Broadway, Suite 22C, New York, New York 10019. Our telephone number is (212) 489-2100. Our website address is <http://www.delcath.com>. Information contained in, or accessible through, our website does not constitute any part of, and is not incorporated into, this prospectus.

## DESCRIPTION OF THE TRANSACTIONS

### *Term Loan from Avenue Venture Opportunities Fund, L.P.*

On August 6, 2021, we entered into a Loan and Security Agreement and Supplement to Loan and Security Agreement (together, the “Loan Agreement”) with Avenue Venture Opportunities Fund, L.P. (the “Lender,” or “Avenue Capital”) for a term loan in an aggregate principal amount of up to \$20,000,000 (the “Loan”). The Loan bears interest at an annual rate equal to the greater of (a) the sum of 7.70% plus the prime rate as reported in The Wall Street Journal and (b) 10.95%. The Loan is secured by a security interest in all of the Company’s assets. The Loan maturity date is August 1, 2024.

At closing, the Lender funded the initial \$15,000,000 tranche of the Loan (“Tranche 1”), including \$4,000,000 which has been funded into a restricted account and will be released upon achievement of (a)(x) positive FOCUS trial efficacy per the trial’s predefined Statistical Analysis Plan (SAP) (specifically the Overall Response Rate exceeds the pre-specified threshold for success defined in the SAP by a statistically significant amount); and (y) based on data contained within the FOCUS trial database and appropriate for use with the U.S. Food and Drug Administration, safety and tolerability among FOCUS trial participants is within the range of currently approved and commonly used cytotoxic chemotherapeutic agents; and (b) raising subsequent net equity proceeds of at least \$20,000,000. The Company may request an additional \$5,000,000 principal amount (“Tranche 2”) from the Lender between October 1, 2022 and December 31, 2022, with funding of Tranche 2 subject to approval of Avenue Capital’s Investment Committee.

Up to \$3,000,000 of the principal amount of the Loan outstanding may be converted (the “Loan Conversion”), at the option of the Lender, into shares of the Company’s common stock at a conversion price of \$11.98 per share. The Lender’s right to exercise the Loan Conversion is subject to the Beneficial Ownership Limitation set forth in the Warrant discussed below.

In connection with the Loan, on August 6, 2021, the Company issued to the Lender a warrant (the “Warrant”) to purchase an Applicable Number of shares of Common Stock at an exercise price per share equal to \$0.01, which Warrant is exercisable until August 31, 2026. “Applicable Number” means (x) 127,755 shares of Common Stock as of the date the Warrant was issued *plus* (y) as of the funding date of Tranche 2, if at all, (A) 8.50% of the funded Tranche 2 *multiplied by* (B) the five-day volume weighted average price per share of Common Stock, determined as of the end of trading on the last trading day before the funding of Tranche 2. The Warrant may not be exercised by the Lender or other holder thereof (the “Holder”) to the extent that after giving effect to the issuance of shares of Common Stock after the exercise of the Warrant, the Holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of the Warrant (the “Beneficial Ownership Limitation”). The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of the Warrant.

The Loan Agreement requires that the Company prepare and file with the SEC a registration statement on Form S-3 to register all of the shares of Common Stock issuable upon the exercise of the Loan Conversion and the Warrant. It is not possible to determine if Tranche 2 or any portion thereof will ever be funded and, therefore, it is not possible to determine the Applicable Number of shares of Common Stock issuable upon exercise of the Warrant after the funding of Tranche 2. Accordingly, the shares of Common Stock registered hereunder include the 127,755 shares that are now available for issuance upon an exercise of the Warrant. If and at such time that Tranche 2 of the Loan is funded, the Company will register the additional shares of Common Stock that will become available for issuance upon an exercise of the Warrant.

### *Rosalind Convertible Notes*

On June 6, 2019, the Company entered into a note purchase agreement with Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. (together, “Rosalind”), pursuant to which Rosalind agreed to transfer and

## [Table of Contents](#)

surrender to the Company for cancellation, warrants to purchase 5,605 shares of our Common Stock (the “Series D Warrants”) and warrants to purchase 0.1 million shares of our Common Stock (the “Pre-Funded Series D Warrants”). Under the terms of the note purchase agreement, the Company agreed to sell and issue to Rosalind 8% Senior Secured Promissory Notes (“Convertible Notes”) in an aggregate principal amount of \$2,000,000 secured by a security interest in all assets of the Company and maturing on July 15, 2021, in full payment and satisfaction of the purchase price for the Series D Warrants and Pre-Funded Series D Warrants.

The transactions contemplated by the note purchase agreement were effective and the Convertible Notes were issued on July 15, 2019, upon the closing of the Company’s July 2019 private placement of Series E convertible preferred stock, par value \$0.01 per share (“Series E Preferred Stock) and warrants to purchase shares of Common Stock, to various investors, including Rosalind (the “July 2019 Private Placement”). Immediately following the closing of the July 2019 Private Placement, the Convertible Notes were amended, pursuant to a note amending agreement dated as of July 15, 2019 between the Company and Rosalind to provide that the outstanding principal amount of the Convertible Notes and any accrued and unpaid interest thereon are convertible, at the option of the holder of the Convertible Notes, into shares of Series E Preferred Stock at the price of \$1,500.

On August 6, 2021, in connection with the closing of the term loan between the Company and Avenue Capital, the Company and Rosalind executed a Second Note Amending Agreement to further amend the Convertible Notes by (a) reducing the conversion price of the notes to \$1,198 per share of Series E Preferred Stock; and (b) extending the maturity date of the Convertible Notes to October 30, 2024. In addition, in order to induce Avenue Capital to provide the Loan, Rosalind agreed to subordinate (a) all of the Company’s indebtedness and obligations to the holders of the Convertible Notes and (b) all of the Convertible Note holders’ security interest in the Company’s assets, to the Loan and Avenue Capital’s security interest in the Company’s assets.

The shares of Common Stock registered hereunder include the shares of Common Stock issuable to Rosalind upon any conversion of Series E Preferred Stock held by Rosalind resulting from the conversion of Convertible Notes.

### *Common Stock Held by Director Roger G. Stoll and Chief Operating Officer John Purpura*

In July 2019, Roger G. Stoll, the Chair of the Company’s Board of Directors, participated in the July 2019 Private Placement and, in connection therewith, was issued 93 shares of Series E Preferred Stock and a warrant to purchase 4,038 shares of Common Stock. The Series E Preferred Stock and related warrant were issued to Mr. Stoll in lieu of cash compensation owed to him for his services as a director of the Company in 2018. In May 2020, Mr. Stoll exercised his right to convert his Series E Preferred Stock to Common Stock and, as a result thereof, was issued 9,300 unregistered shares of Common Stock. The shares of Common Stock registered hereunder include the 9,300 unregistered shares of Common Stock held by Mr. Stoll.

In July 2019, John Purpura, the Company’s current Chief Operating Officer, participated in the July 2019 Private Placement and, in connection therewith, was issued 65 shares of Series E Preferred Stock and a warrant to purchase 1,083,333 shares of Common Stock. The Series E Preferred Stock and related warrant were issued to Mr. Purpura in lieu of cash compensation owed to him for his services as an officer of the Company in 2018. In May 2020, Mr. Purpura exercised his right to convert his Series E Preferred Stock to Common Stock and, as a result thereof, was issued 6,500 unregistered shares of Common Stock. In addition, in May 2020, Mr. Purpura received an additional 6,613 unregistered shares of Common Stock in lieu of a cash bonus due to him for his services as an officer of the Company in 2019. The shares of Common Stock registered hereunder include the aggregate 13,113 unregistered shares of Common Stock held by Mr. Purpura.

## DESCRIPTION OF CAPITAL STOCK

### Authorized Capital Stock

The following is a description of the material terms of our capital stock included in our Amended and Restated Certificate of Incorporation, as amended (our “Certificate of Incorporation”), and our Amended and Restated By-Laws (our “By-Laws”). This description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our Certificate of Incorporation and By-Laws, 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.

Our authorized capital stock consists of:

- 40,000,000 shares of common stock, par value \$0.01 per share; and
- 10,000,000 shares of preferred stock, par value \$0.01 per share.

Our common stock is the only class or series of our securities which has been registered under Section 12 of the Securities Exchange Act of 1934, as amended, and is listed on The Nasdaq Capital Market under the symbol “DCTH”. Of the 10,000,000 authorized shares of preferred stock, an aggregate of 52,960 shares are designated as Series E Preferred Stock or Series E-1 Preferred Stock. As of October 5, 2021, there were outstanding 7,356,289 shares of our common stock and an aggregate of 11,707.21 shares of Series E Preferred Stock and Series E-1 Preferred Stock.

As of October 5, 2021, there were 2,475,000 shares of the Company’s common stock reserved under the Delcath Systems, Inc. 2020 Omnibus Equity Incentive Plan, of which 1,255,250 shares remained available to be issued. As of October 5, 2021, we had (a) 3,894,498 shares of common stock issuable upon the exercise of outstanding warrants, including (i) 1,758,843 Series E and Series E-1 Warrants, (ii) 1,851,900 Series F Warrants, (iii) 156,000 Series F Pre-funded Warrants and (iv) 127,755 shares of common stock that may be issued upon the exercise of a warrant to Avenue Venture Opportunities Fund, L.P at a weighted average exercise price of \$9.27 per share and (b) 1,718,249 shares of common stock issuable upon the exercise of outstanding options with a weighted average exercise price of \$11.69 per share.

### Common Stock

**Voting rights.** Our shares of common stock are entitled to voting rights for the election of directors and for all other matters requiring stockholder action. Each holder of common stock is entitled to one vote for each share, except as otherwise required by law, and subject to the rights of the holders of preferred stock. The common stock does not have cumulative voting rights.

**Dividend rights.** Holders of our common stock are entitled to receive such dividends, if any, as may be declared from time to time by our board of directors in its discretion out of funds legally available therefor. Holders of common stock share ratably in any dividends declared by our board of directors, subject to any preferential dividend rights of any outstanding preferred stock. Dividends consisting of shares of common stock may be paid to holders of shares of common stock. We do not intend to pay cash dividends in the foreseeable future.

**Liquidation rights.** Upon our liquidation or dissolution, the holders of our common stock will be entitled to receive, pro rata, all assets remaining available for distribution to stockholders after payment of all liabilities and provision for the liquidation of any shares of preferred stock at the time outstanding.

**Other Rights and Restrictions.** Our common stock has no preemptive or other subscription rights, and there are no conversion rights or redemption or sinking fund provisions with respect to such stock. Our common stock is not subject to redemption by us. Our Certificate of Incorporation and Bylaws do not restrict the ability of a holder of common stock to transfer the stockholder’s shares of common stock. If we issue shares of common stock under this prospectus, the shares will be fully paid and non-assessable and will not have, or be subject to, any preemptive or similar rights.

**Market Information.** *Our common stock is traded on the Nasdaq Capital Market under the symbol “DCTH”.*

**Transfer Agent and Registrar.** The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC

### **Preferred Stock**

Our board of directors has the authority to issue up to 10,000,000 shares of preferred stock in one or more series and to determine the rights and preferences of the shares of any such series without stockholder approval, of which 11,707.21 shares of Series E Preferred Stock and Series E-1 Preferred Stock, or, collectively, the Preferred Stock, is outstanding as of October 5, 2021. Our board of directors may issue preferred stock in one or more series and has the authority to fix the designation and powers, rights and preferences and the qualifications, limitations, or restrictions with respect to each class or series of such class without further vote or action by the stockholders. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of us or the removal of existing management.

In connection with a private placement in July 2019, the Company filed a certificate of designation of Preferences, Rights and Limitations of Series E Preferred Stock with the Secretary of State of the State of Delaware, or the Delaware SOS, for the purpose of amending its Certificate of Incorporation to classify and designate 40,000 authorized but unissued shares of the Company’s preferred stock as shares of Series E Preferred Stock. The preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends and other distributions, qualifications and terms and conditions of redemption of the Series E Preferred Stock are set forth in the Certificate of Designation and are described below. The certificate of designation became effective on July 11, 2019 upon acceptance for filing by the Delaware SOS.

In connection with a private placement in August 2019, the Company filed a certificate of designation of Preferences, Rights and Limitations of Series E-1 Preferred Stock with Delaware SOS, for the purpose of amending its Certificate of Incorporation to classify and designate 12,960 authorized but unissued shares of the Company’s preferred stock as shares of Series E-1 Preferred Stock. The preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends and other distributions, qualifications and terms and conditions of redemption of the Series E-1 Preferred Stock are set forth in the certificate of designation and are described below. The certificate of designation became effective on August 15, 2019 upon acceptance for filing by the Delaware SOS.

**Conversion rights.** Each share of the Series E Preferred Stock and Series E-1 Preferred Stock has a par value of \$0.01 per share and a stated value equal to \$1,000, or the Stated Value, and is convertible at any time at the option of the holder into the number of shares of common stock determined by dividing the stated value by the conversion price of \$10.00, subject to certain limitations and adjustments, or the Conversion Price.

**Voting rights.** The Preferred Stock votes on an as converted basis on all matters submitted to the holders of common stock for approval, subject to certain limitations and exceptions. The affirmative vote of the holders of a majority of the then outstanding shares of Preferred Stock is required to increase the number of authorized shares of Preferred Stock or to alter or change adversely the powers, preferences or rights given to the Preferred Stock, or to amend the Company’s organizational documents in any manner that adversely affects the rights of the holders of the Preferred Stock.

**Dividend rights.** Except for certain adjustments, the holders of Preferred Stock are entitled to receive dividends on shares of Preferred Stock equal (on an as if converted basis) to and in the same form as dividends paid on shares of the common stock. Any such dividends that are not paid to the holders of Preferred Stock will increase the Stated Value. No other dividends will be paid on shares of Preferred Stock.

**Liquidation rights.** Upon any liquidation of the Company, the holders of Preferred Stock will be entitled to receive out of the assets of the Company an amount equal to the Stated Value plus any accrued and unpaid dividends thereon for each share of Preferred Stock before any distribution or payment will be made to the holders of the common stock.

#### **Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws**

Certain provisions of our Certificate of Incorporation and Bylaws could have the effect of making it more difficult for our stockholders to replace management at a time when a substantial number of stockholders might favor a change in management. These provisions include:

- providing for a staggered board; and
- authorizing the board of directors to fill vacant directorships or increase the size of its board of directors.

Furthermore, our board of directors has the authority to issue up to 9,929,890 shares of preferred stock in one or more series and to determine the rights and preferences of the shares of any such series without stockholder approval. Any series of preferred stock is likely to be senior to the common stock with respect to dividends, liquidation rights and, possibly, voting rights. The board's ability to issue preferred stock may have the effect of discouraging unsolicited acquisition proposals, thus adversely affecting the market price of our common stock.

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits Delaware corporations from engaging in a wide range of specified transactions with any interested stockholder, defined to include, among others, any person other than such corporation and any of its majority owned subsidiaries who own 15% or more of any class or series of stock entitled to vote generally in the election of directors, unless, among other exceptions, the transaction is approved by (i) our board of directors prior to the date the interested stockholder obtained such status or (ii) the holders of two-thirds of the outstanding shares of each class or series of stock entitled to vote generally in the election of directors, not including those shares owned by the interested stockholder.

**Staggered Board of Directors.** Our Certificate of Incorporation and Bylaws provide that our board of directors be classified into three classes of directors of approximately equal size. As a result, in most circumstances, a person can gain control of our board only by successfully engaging in a proxy contest at two or more annual meetings.

**Authorized but Unissued Shares.** Our authorized but unissued shares of preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, corporate acquisitions, employee benefit plans and stockholder rights plans. The existence of authorized but unissued and unreserved preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

## THE OFFERING

<b>Issuer</b>	Delcath Systems, Inc.
<b>Common Stock offered by the Selling Stockholders</b>	<p>(i) Up to 237,614 shares that may be issued to Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. (together, “Rosalind”) upon the conversion of up to an aggregate of 2,376.14 shares of our Series E Convertible Preferred Stock, par value \$0.01 per share (the “Series E Preferred Stock”), at a conversion price of \$1,198 per share, following an election by Rosalind to convert into shares of Series E Preferred Stock an aggregate \$2,000,000 principal amount of 8% senior secured promissory notes held by Rosalind, including all accrued interest thereunder, which notes mature and become due and payable by us on October 30, 2024. See “Description of the Transactions,” “Selling Stockholders” and “Description of Capital Stock – Series E Preferred Stockholders’ Right to Convert into Common Stock.”</p> <p>(ii) Up to 250,417 shares that may be issued to Avenue Venture Opportunities Fund, L.P. (“Avenue Capital”) upon Avenue Capital’s election to convert, at a conversion price of \$11.98 per share, up to \$3,000,000 of the principal amount of a \$15,000,000 secured senior term loan (the “Loan”) made by Avenue Capital to the Company on August 6, 2021 pursuant to the terms of a Loan and Security Agreement and Supplement to Loan and Security Agreement (together, the “Loan Agreement”) between the Company and Avenue Capital, which Loan may be increased to \$20,000,000 at the request of the Company subject to approval of Avenue Capital. See “Description of the Transactions” and “Selling Stockholders.”</p> <p>(iii) Up to 127,755 shares that may be issued to Avenue Capital upon the exercise of a common stock warrant (the “Warrant”) issued to Avenue Capital in connection with the Loan pursuant to the Loan Agreement, having an exercise price of \$0.01 per share, exercisable until August 31, 2026. See “Description of the Transactions” and “Selling Stockholders.”</p> <p>(iv) An aggregate of 22,413 shares of Common Stock held by (1) our director Roger Stoll, which shares were issued to him in lieu of cash compensation owed to him for his service on our board of directors in 2018 and (2) our executive officer, John Purpura, which shares were issued to him in lieu of cash compensation owed to him for his services as an executive officer in 2018 and 2019, respectively. See “Selling Stockholders.”</p>
<b>Use of Proceeds</b>	We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder. However, assuming (i) the conversion of all of the Series E Preferred Stock following an election to convert the principal amount and all accrued interest under the 8% senior secured promissory notes into such shares, (ii) the conversion of the entire convertible portion of the Loan and (iii) the exercise of the Warrant, we will receive, upon issuance of the Common Stock to the Selling Stockholders \$1,278 upon exercise of the Warrant, the outstanding principal amount of the Loan will be reduced by \$3 million and the 8% senior secured promissory notes will be no longer be outstanding. See “The Offering” and “Use of Proceeds” for more details.
<b>Trading Market and Ticker Symbol for Common Stock</b>	Our Common Stock is listed on The Nasdaq Capital Market under the symbol “DCTH.”
<b>Risk Factors</b>	Investing in our securities involves a high degree of risk. For a discussion of factors to consider before deciding to invest in our Common Stock, you should carefully review and consider the “Risk Factors” section of this prospectus, as well as the risk factors described or referred to in any documents incorporated by reference in this prospectus, and in any applicable prospectus supplement or amendment.

## **RISK FACTORS**

An investment in our Common Stock involves a high degree of risk. Prior to making a decision about investing in our Common Stock, you should consider carefully the specific risk factors discussed in the sections entitled “*Risk Factors*” contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2020, as filed with the SEC on March 31, 2021, which are incorporated in this prospectus by reference in their entirety. Additional risk factors that you should carefully consider may be included in our subsequent filings with the SEC, including a prospectus supplement or amendment hereto relating to an offering of our Common Stock by us or the Selling Stockholders. The risks and uncertainties described in this prospectus, any applicable prospectus supplement or amendment, and the documents incorporated by reference herein are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in this prospectus, any applicable prospectus supplement or amendment, or the documents incorporated by reference herein actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our Common Stock could decline, perhaps significantly, and you might lose part or all of your investment.



## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, and the documents incorporated by reference herein, contain, or will contain, “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as “intends,” “believes,” “anticipates,” “indicates,” “plans,” “expects,” “suggests,” “may,” “would,” “should,” “potential,” “designed to,” “will,” “ongoing,” “estimate,” “forecast,” “predict,” “could,” and similar references, although not all forward-looking statements contain these words. Forward-looking statements are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Risks that could cause actual results to vary from expected results expressed in our forward-looking statements include, but are not limited to:

- our estimates regarding sufficiency of our cash resources, anticipated capital requirements and our need for additional financing;
- the commencement of future clinical trials and the results and timing of those clinical trials;
- our ability to successfully commercialize CHEMOSAT and HEPZATO, generate revenue and successfully obtain reimbursement for the procedure and Delcath Hepatic Delivery system;
- the progress and results of our research and development programs;
- our expectations about the COVID-19 pandemic and any disruption or impact to our operations due to the pandemic;
- submission and timing of applications for regulatory approval and approval thereof;
- our ability to successfully source certain components of CHEMOSTAT and HEPZATO and enter into supplier contracts;
- our ability to successfully manufacture CHEMOSAT and HEPZATO;
- our ability to successfully negotiate and enter into agreements with distribution, strategic and corporate partners;
- our estimates of potential market opportunities and our ability to successfully realize these opportunities; and
- other factors discussed under the headings “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our most recent Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q for the quarterly periods ended subsequent to our filing of such Annual Report on Form 10-K, as well as any amendments thereto reflected in subsequent filings with the SEC, which sections are incorporated by reference.

Forward-looking statements speak only as of the date the statements are made. Except as required under the federal securities laws and rules and regulations of the SEC, we undertake no obligation to update or revise forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information. We caution you not to unduly rely on the forward-looking statements when evaluating the information presented herein.

## USE OF PROCEEDS

We will not receive any of the proceeds from the shares of Common Stock sold by the Selling Stockholders hereunder. However, assuming (i) the conversion of all of the Series E Preferred Stock following an election to convert the principal amount and all accrued interest under the 8% senior secured promissory notes into such shares, (ii) the conversion of the entire convertible portion of the Loan and (iii) the exercise of the Warrant, we will receive, upon issuance of the Common Stock to the Selling Stockholders \$1,278 upon exercise of the Warrant (which will be used for working capital purposes), the outstanding principal amount of the Loan will be reduced by \$3 million and the 8% senior secured promissory notes will be no longer be outstanding. We have agreed to pay all costs, expenses and fees relating to the registration of the shares of Common Stock covered by this prospectus.

## SELLING STOCKHOLDERS

The Selling Stockholders, or each of their donees, pledgees, assignees, transferees or other successors-in-interest, are offering for resale, from time to time, up to an aggregate of 638,199 shares of Common Stock. The shares of Common Stock covered by this prospectus represent all the shares of Common Stock that have been or may be issued to the Selling Stockholders in connection with the transactions described under the heading “The Offering” on page 11 of this prospectus. The following table sets forth certain information with respect to beneficial ownership of our Common Stock as of October 5, 2021 by the Selling Stockholders, as determined in accordance with Rule 13d-3 of the Exchange Act of 1934, as amended (the “Exchange Act”), prior to this offering and after this offering. This information has been obtained from the Selling Stockholders or in Schedules 13G or 13D and other public documents filed with the SEC.

The number of shares of Common Stock beneficially owned after this offering assumes the sale of all of the Common Stock offered by the Selling Stockholders pursuant to this prospectus. However, because the Selling Stockholders may sell none, some or all of the shares of Common Stock covered by this prospectus from time to time, or in another permitted manner, we cannot assure you as to the actual number of shares of Common Stock that will be sold by the Selling Stockholders or that will be held by the Selling Stockholders after completion of any sales. We do not know how long the Selling Stockholder will hold the shares of Common Stock covered by this prospectus before selling them. Information concerning the Selling Stockholders may change from time to time and changed information will be presented in a supplement to this prospectus if and when necessary and required. However, the Selling Stockholders may sell or transfer all or a portion of their shares of Common Stock covered by this prospectus pursuant to any available exemption from the registration requirements of the Securities Act.

## SELLING STOCKHOLDER TABLE

<u>Investor Name and Address</u>	<u>Total Shares Beneficially Owned Prior to Offering(1)</u>	<u>Maximum Number of Shares to be Sold Pursuant to the Prospectus(2)</u>	<u>Number of Shares Beneficially Owned After Offering(2)</u>	<u>% of Class After Offering*</u>
Avenue Venture Opportunities Fund, L.P. (3) c/o Avenue Capital Group 11 West 42nd Street, 9th Floor New York, NY 10036	378,172	378,172	—	*
Rosalind Opportunities Fund I L.P. Rosalind Master Fund L.P. (4) c/o Rosalind Advisors, Inc. 175 Bloor Street East Suite 1316, North Tower Toronto, Ontario M4W 3R8 Canada	769,676	237,614	840,508	9.99%

## Table of Contents

<u>Investor Name and Address</u>	<u>Total Shares Beneficially Owned Prior to Offering(1)</u>	<u>Maximum Number of Shares to be Sold Pursuant to the Prospectus(2)</u>	<u>Number of Shares Beneficially Owned After Offering(2)</u>	<u>% of Class After Offering*</u>
Roger G. Stoll, Ph.D. (5) c/o Delcath Systems, Inc. 1633 Broadway, Suite 22C New York, New York 10019	36,142	9,300	26,842	*
John Purpura (6) c/o Delcath Systems, Inc. 1633 Broadway, Suite 22C New York, New York 10019	104,776	13,113	91,663	1.13%

\* Percentage not listed if less than 1%.

- (1) “Beneficial ownership” means that a person, directly or indirectly, has or shares voting or investment power with respect to a security or has the right to acquire such power within 60 days. The number of shares beneficially owned is determined as of October 4, 2021, and the percentage is based upon 7,356,289 shares of our Common Stock outstanding as of October 4, 2021.
- (2) Assumes sale of all shares of Common Stock covered by this prospectus and no further acquisitions of shares of Common Stock by the Selling Stockholders.
- (3) Based partially on the Company’s records and, in part, on information provided by Avenue Venture Opportunities Fund, L.P., consists of (i) 250,417 shares of Common Stock that may be issued to such Selling Stockholder upon the conversion of up to \$3 million principal amount of the Loan and (ii) 127,755 shares of Common Stock that may be issued to such Selling Stockholder upon the exercise of the Warrant. The convertible portion of the Loan may not be converted and the Warrant may not be exercised by such Selling Stockholder to the extent that after giving effect to the issuance of shares of Common Stock after the conversion of the convertible portion of the Loan or the exercise of the Warrant, such Selling Stockholder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of the convertible portion of the Loan or the exercise of the Warrant.
- (4) Based partially on the Company’s records and, in part, on information provided in a Statement on Schedule 13D/A jointly filed with the SEC on June 25, 2021, by and on behalf of Rosalind Advisors, Inc., Rosalind Opportunities Fund I L.P., Rosalind Master Fund L.P., Steven Salamon and Dr. Gilad Aharon (collectively, “Rosalind”), Rosalind Advisors, Inc. (advisor to Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P.), Mr. Salamon and Dr. Aharon have shared voting power and dispositive power of (i) 421,500 shares of Common Stock, (ii) 1,090,121 shares of Common Stock issuable upon conversion of 10,901 shares of Series E Preferred Stock, (iii) an aggregate of 198,772 shares of Common Stock issuable upon the conversion of an aggregate 1,988 shares of Series E Preferred Stock, at a conversion rate of \$1,198 per share, following an election by Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. to convert an aggregate \$2 million principal amount of 8% senior secured promissory notes issued by the Company to such Selling Stockholders, together and with all accrued interest thereon into shares of Series E Preferred Stock and (iv) 1,253,958 shares of Common Stock issuable upon exercise of warrants (the “Rosalind Warrants”). The foregoing clauses (ii), (iii) and (iv) indicate the number of share of Common Stock issuable to the Selling Stockholders upon a full conversion of the Series E Preferred Stock and a full exercise of the Rosalind Warrants without giving effect to the Blockers (as defined below). Pursuant to the terms of (i) the certificate of designations containing the terms of the Series E Preferred Stock, the Selling Stockholders cannot convert the Series E Preferred Stock to the extent that the Selling Stockholders would beneficially own, after any such conversion, more than 9.99% of the outstanding shares of the Common Stock (the “Preferred Stock Blockers”) and (ii) the Rosalind Warrants, the Selling Stockholders cannot exercise the Rosalind Warrants to the extent that the Selling Stockholders would beneficially own, after any such exercise,

## [Table of Contents](#)

more than 4.99% of the outstanding shares of Common Stock (the “Rosalind Warrant Blockers” and collectively with the Preferred Stock Blockers, the “Blockers”). The table indicates the number of shares of Common Stock beneficially owned by the Selling Stockholders and the percentage ownership of the Selling Stockholders after giving effect to the Blockers. Mr. Salamon and Dr. Aharon are members of the Board of Directors of the Company pursuant to a Board Appointment Agreement. Mr. Salamon and Dr. Aharon disclaim beneficial ownership with respect to these securities.

- (5) Includes 9,300 shares of Common Stock held by Dr. Stoll, which were issued to Dr. Stoll as equity in lieu of cash compensation, 4,038 shares of Common Stock which Dr. Stoll has the right to acquire upon exercise of outstanding warrants and 22,804 shares of Common Stock which Dr. Stoll has the right to acquire upon exercise of outstanding options exercisable within 60 days of October 4, 2021.
- (6) Includes 13,113 shares of Common Stock held by Mr. Purpura, which were issued to Mr. Purpura as equity in lieu of cash compensation, 2,822 shares of Common Stock which Mr. Purpura has the right to acquire upon exercise of outstanding warrants and 83,241 shares of Common Stock which Mr. Purpura has the right to acquire upon exercise of outstanding options exercisable within 60 days of October 4, 2021.

### **Relationship with Selling Stockholders**

On April 8, 2020, we entered into a Board Appointment Agreement, dated as of April 8, 2020, with Rosalind Opportunities Fund I L.P. and Rosalind Maser Fund L.P. (“Rosalind”), pursuant to which Steven Salamon and Gil Aharon, who are principals of Rosalind, have been appointed as directors of the Company’s board of Directors. Certain shares of Common Stock registered for resale hereunder are also held by Roger G. Stoll, who is the Chairman of the Board of Directors of the Company and John Purpura, who serves as the Chief Operating Officer of the Company. Except as a result of the term loan transaction with Avenue Capital described herein under the heading “Description of the Transactions,” Avenue Capital has not held any position or office with us or any of our predecessors or affiliates within the last three years and has not had a material relationship with us or any of our predecessors or affiliates within the past three years.

## PLAN OF DISTRIBUTION

We are registering the shares of Common Stock issued, or issuable upon the conversion of Series E Preferred Stock, to the Selling Stockholders to permit the resale of those shares of Common Stock by the holders of the shares of Common Stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the Selling Stockholders of the shares of Common Stock. We will bear all fees and expenses incident to our obligation to register the shares of Common Stock.

The Selling Stockholders may sell all or a portion of the share of Common Stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the Shares are sold through underwriters or broker-dealers, the Selling Stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of Common Stock may be sold on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market or in transactions otherwise than on these exchanges or systems or in the over-the-counter market and in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions. The Selling Stockholders may use any one or more of the following methods when selling shares of Common Stock:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares of Common Stock as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares of Common Stock at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether such options are listed on an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders also may resell all or a portion of the shares of Common Stock in open market transactions in reliance upon Rule 144 under the Securities Act, as permitted by that rule, or Section 4(1) under the Securities Act, if available, rather than under this prospectus, provided that they meet the criteria and conform to the requirements of those provisions.

Broker-dealers engaged by the Selling Stockholders may arrange for other broker-dealers to participate in sales. If the Selling Stockholders effects such transactions by selling shares of Common Stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the Selling Stockholders or commissions from purchasers of the shares of Common Stock for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with FINRA Rule 5110.

In connection with sales of the shares of Common Stock, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the

## Table of Contents

shares in the course of hedging in positions they assume. The Selling Stockholders may also sell shares short and if such short sale shall take place after the date that the registration statement of which this prospectus is a part is declared effective by the SEC, the Selling Stockholders may deliver the shares covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Stockholders may also loan or pledge shares to broker-dealers that in turn may sell such shares, to the extent permitted by applicable law. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares of Common Stock offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). Notwithstanding the foregoing, the Selling Stockholders have been advised that they may not use shares of Common Stock registered under the registration statement of which this prospectus is a part to cover short sales of our Common Stock made prior to the date the registration statement, of which this prospectus forms a part, has been declared effective by the SEC.

A Selling Stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of Common Stock owned by it and, if the Selling Stockholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the shares from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus. A Selling Stockholders also may transfer and donate its shares of Common Stock in other circumstances in which case the donees, pledgees, assignees, transferees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares of Common Stock may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the shares.

Each Selling Stockholder has informed us that it is not a registered broker-dealer and does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the shares of Common Stock. Upon us being notified in writing by a Selling Stockholder that any material arrangement has been entered into with a broker-dealer for the sale of shares of Common Stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of the Selling Stockholder and of the participating broker-dealer(s), (ii) the number of shares of Common Stock involved, (iii) the price at which such shares of Common Stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction.

We will pay certain fees and expenses incurred by us incident to the registration of the shares of Common Stock hereunder. We have agreed to indemnify Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Under the securities laws of some states, the shares of Common Stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

## [Table of Contents](#)

The Selling Stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act, and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of Common Stock by the Selling Stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of Common Stock to engage in market-making activities with respect to the shares. All of the foregoing may affect the marketability of the shares and the ability of any person or entity to engage in market-making activities with respect to the shares.

### LEGAL MATTERS

The validity of the shares of Common Stock to be offered for resale by the Selling Stockholder under this prospectus will be passed upon for us by McCarter & English, LLP, Newark, New Jersey.

### EXPERTS

The consolidated financial statements as of December 31, 2020 and 2019 and for each of the two years in the period ended December 31, 2020 incorporated by reference in this prospectus have been so incorporated in reliance on the report of Marcum, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

### WHERE YOU CAN FIND MORE INFORMATION AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus the information contained in other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded, for purposes of this prospectus, to the extent that a statement contained in or omitted from this prospectus, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. We incorporate by reference the documents listed below which have been filed by us:

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2020, filed with the SEC on March 31, 2021, including those portions of the Form 10-K incorporated by reference from our definitive [proxy statement](#) filed with the SEC on April 7, 2021;
- Our Quarterly Reports on Form 10-Q for the periods ended (i) March 31, 2021, filed with the SEC on [May 11, 2021](#) and (ii) June 30, 2021, filed with the SEC on [August 10, 2021](#);
- Our Current Reports on Form 8-K, filed with the SEC on [March 1, 2021](#), [April 1, 2021](#), [May 7, 2021](#), [June 29, 2021](#) and [August 11, 2021](#); and
- The description of our common stock contained in our registration on [Form 8-A12B](#) (File No. 001-16133) filed with the SEC on April 30, 2020, including any amendment or report filed for the purpose of updating such description.

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or documents that is not deemed filed under such provisions, (1) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (2) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or the registration statement of which this prospectus is a part has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from

## [Table of Contents](#)

the date of filing of those documents and will be automatically updated and, to the extent described above, supersede information contained or incorporated by reference in this prospectus and previously filed documents that are incorporated by reference in this prospectus.

Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02, 7.01 or 9.01 of Form 8-K. Upon written or oral request, we will provide without charge to each person, including any beneficial owner, to whom a copy of the prospectus is delivered a copy of any or all of the reports or documents incorporated by reference herein (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference herein). You may request a copy of these filings, at no cost, by writing or telephoning us at the following address: Delcath Systems, Inc., 1633 Broadway, Suite 22C, New York, New York 10019.

We maintain a website at [www.delcath.com](http://www.delcath.com). You may access our definitive proxy statements on Schedule 14A, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and periodic amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus. You should not consider the contents of our website in making an investment decision with respect to our common stock.

We have not authorized any one to provide you with any information that differs from that contained in this prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

The SEC maintains an Internet site that contains all reports and other information that we file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov).

\* \* \*





**Up to 638,199 Shares of  
Common Stock Offered by the Selling Stockholders**

---

**PROSPECTUS**

---

**, 2021**

We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.

---

---

**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth various expenses being borne by the Company in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates except for the Securities and Exchange Commission Registration Fee.

Securities and Exchange Commission registration fee	\$ 610.54
Accountants fees and expenses	10,300.00
Legal fees and expenses	45,000.00
Miscellaneous	3,775.00
<b>Total:</b>	<b>\$ 59,686.04</b>

**Item 15. Indemnification of Directors and Officers.**

The Company is incorporated under the laws of the State of Delaware. Section 102(b)(7) of Delaware's General Corporation Law (the "DGCL") allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation provides for this limitation of liability.

Section 145 of the DGCL, or Section 145, provides that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who are, were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests, provided that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against him and incurred by him in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Article SEVENTH of the Company's amended and restated certificate of incorporation provides that no person serving as a director of the Company shall be personally liable to the Company or its stockholders for

## [Table of Contents](#)

breach of his or her fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or a knowing violation of law, authorized the payment of a dividend or approved a stock repurchase in violation of the DGCL or obtained an improper personal benefit.

Article EIGHTH of the Company's amended and restated certificate of incorporation requires the Company to indemnify any person who may be indemnified by a Delaware corporation pursuant to Section 145 of the DGCL in each situation where the Company is permitted to indemnify such persons.

We have entered into indemnification agreements with our executive officers and directors pursuant to which we have agreed to indemnify such persons against all expenses and liabilities incurred or paid by such person in connection with any proceeding arising from the fact that such person is or was an officer or director of our company, and to advance expenses as incurred by or on behalf of such person in connection therewith.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our certificate of incorporation, our bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

In addition, we maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

### **Item 16. Exhibits.**

A list of exhibits filed with this registration statement on Form S-3 is set forth on the Exhibit Index and is incorporated herein by reference.

### **Item 17. Undertakings.**

The Registrant hereby undertakes:

(a)

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

*provided, however*, that paragraphs a(i), a(ii) and a(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered

## Table of Contents

therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes that: (1) for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and (2) for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

## Exhibit Index

<u>Exhibit Number</u>	<u>Description</u>
3.1	<a href="#">Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-1/A filed September 25, 2019).</a>
3.2	<a href="#">Amendment to the Amended and Restated Certificate of Incorporation of the Company dated October 17, 2019 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on October 23, 2019).</a>
3.3	<a href="#">Certificate of Correction to Amendment to the Amended and Restated Certificate of Incorporation of the Company dated October 22, 2019 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed on October 23, 2019).</a>
3.4	<a href="#">Amendment to the Amended and Restated Certificate of Incorporation of the Company, effective December 24, 2019 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on December 30, 2019).</a>
3.5	<a href="#">Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company, dated November 23, 2020 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 24, 2020).</a>
3.6	<a href="#">Amended and Restated By-Laws of the Company (incorporated by reference to Exhibit 3.2 to Amendment No. 1 to Company's Registration Statement on Form SB-2).</a>
3.7	<a href="#">Certificate of Designation of Preferences, Rights and Limitations of Series E Convertible Preferred Stock of Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed July 11, 2019).</a>
3.8	<a href="#">Certificate of Designation of Preferences, Rights and Limitations of Series E-1 Convertible Preferred Stock of Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed August 16, 2019).</a>
4.1	Reference is made to Exhibits 3.1 through 3.8 and Exhibit 10.3.
5.1	<a href="#">Opinion of McCarter &amp; English, LLP*</a>
10.1	<a href="#">Loan and Security Agreement, dated August 6, 2021, between Delcath Systems, Inc., as borrower, and Avenue Venture Opportunities Fund, L.P., as lender (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>
10.2	<a href="#">Supplement to the Loan and Security Agreement, dated August 6, 2021, between Delcath Systems, Inc. as borrower, and Avenue Venture Opportunities Fund, L.P., as lender (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>
10.3	<a href="#">Warrant, dated August 6, 2021, issued by Delcath Systems, Inc. to Avenue Venture Opportunities Fund, L.P. (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>
10.4	<a href="#">8% Secured Promissory Note, dated July 15, 2019, issued by Delcath Systems, Inc. to Rosalind Opportunities Fund I L.P. (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>
10.5	<a href="#">8% Secured Promissory Note, dated July 15, 2019, issued by Delcath Systems, Inc. to Rosalind Master Fund L.P. (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>
10.6	<a href="#">Note Amending Agreement, dated as of July 15, 2019, between Delcath Systems, Inc. and Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed August 11, 2021)</a>

## Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.7	<a href="#"><u>Second Note Amending Amendment, dated as of August 6, 2021, between Delcath Systems, Inc. and Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed August 11, 2021)</u></a>
23.1	<a href="#"><u>Consent of Marcum, LLP, an Independent Registered Public Accounting Firm.*</u></a>
23.2	<a href="#"><u>Consent of McCarter &amp; English, LLP (included in Exhibit 5.1).*</u></a>
24.1	<a href="#"><u>Powers of Attorney (included on the signature page of Part II of this Registration Statement on Form S-3).*</u></a>

\* Filed herewith

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in New York, New York, on October 6, 2021.

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gerard Michel as attorney-in-fact, with power of substitution, in any and all capacities, to sign any and all amendments and post-effective amendments to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

### DELCATH SYSTEMS, INC.

By: /s/ Gerard Michel

Gerard Michel

Chief Executive Officer

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gerard Michel</u> Gerard Michel	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	October 6, 2021
<u>/s/ Christine Padula</u> Christine Padula	Interim Principal Accounting Officer <i>(Interim Principal Accounting Officer)</i>	October 6, 2021
<u>/s/ Christine Padula</u> Roger G. Stoll, Ph.D.	Director	October 6, 2021
<u>/s/ Elizabeth Czerepak</u> Elizabeth Czerepak	Director	October 6, 2021
<u>/s/ Steven Salamon</u> Steven Salamon	Director	October 6, 2021
<u>/s/ John R. Sylvester</u> John R. Sylvester	Director	October 6, 2021
<u>/s/ Gilad Aharon</u> Gilad Aharon	Director	October 6, 2021



McCarter & English, LLP  
Four Gateway Center  
100 Mulberry Street  
Newark, NJ 07102-4056  
www.mccarter.com

October 6, 2021

Delcath Systems, Inc.  
1633 Broadway, Suite 22C  
New York, NY 10019

Re: Delcath Systems, Inc. Shelf Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Delcath Systems, Inc., a Delaware corporation (the “Company”), in connection with the Company’s Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “Act”). The Registration Statement relates to the offer and sale by the selling stockholders identified therein (the “Selling Stockholders”) of up to 638,199 shares of the Company’s common stock, par value \$0.01 per share (“Common Stock”), consisting of (a) up to 237,614 shares of Common Stock that may be issued to Selling Stockholders upon the conversion of an aggregate of up to 2,376.14 shares of the Company’s Series E Convertible Preferred Stock, par value \$0.01 per share (the “Series E Preferred Stock”), at a conversion price of \$1,198 per share, following an election by such Selling Stockholders to convert the principal amount of, and all interest accruing under, 8% senior secured promissory notes issued by the Company to such Selling Stockholders (the principal of which is \$2 million, and the accrued interest on which as of the date hereof is \$344,556) into shares of Series E Preferred Stock, (b) up to an aggregate of 378,172 shares of Common Stock that may be issued to a Selling Stockholder, consisting of (i) 250,417 shares of Common Stock that may be issued to such Selling Stockholder upon the conversion of up to \$3 million principal amount of a loan made to the Company by such Selling Stockholder (the “Loan”) and (ii) 127,755 shares of Common Stock that may be issued to such Selling Stockholder upon the exercise of a warrant for 127,755 shares of the Company’s Common Stock issued to such Selling Stockholder in connection with the Loan at an exercise price of \$0.01 per share (the “Warrant”), and (c) 22,413 shares of Common Stock held by Selling Stockholders (collectively, the “Offering Shares”), which Offering Shares may be sold from time to time pursuant to Rule 415 under the Act. This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

In connection with this opinion letter, we have examined the following: (i) the Registration Statement, including the exhibits thereto, (ii) the Amended and Restated Certificate of Incorporation of the Company, as amended, as certified by the Secretary of the State of Delaware and as certified by the Secretary of the Company (the “Certificate of Incorporation”), (iii) the Amended and Restated Bylaws of the Company as currently in effect and as certified by the Secretary of the Company, (iv) a copy of certain resolutions of the Board of Directors of the Company, adopted on August 5, 2021, relating to the registration of the Securities, as certified by the Secretary of the Company and (v) such other documents, records and other instruments as we have deemed appropriate for purposes of the opinions set forth herein.

In such examination, we have assumed (i) the Registration Statement and any amendments thereto (including post-effective amendments) will have become effective; (ii) the Offering Shares will be offered and sold in compliance with applicable federal and state



securities laws and in the manner specified in the Registration Statement and any applicable prospectus supplement to the Prospectus; (iii) the genuineness of all signatures; (iv) the legal capacity of all natural persons; (v) the authenticity of all documents submitted to us as originals; and (vi) the conformity to original documents of all documents submitted to us as certified, conformed or photostatic copies and the authenticity of the originals of such latter documents. As to all questions of fact material to these opinions that have not been independently established, we have relied upon certificates or comparable documents of officers and representatives of the Company.

Based on the foregoing, and subject to the qualifications stated herein, we are of the opinion that (i) the 22,413 Offering Shares currently outstanding are duly authorized, validly issued, fully paid and non-assessable, and (ii) the remaining Offering Shares, when issued in accordance with the terms of the Certificate of Incorporation and upon conversion of the Series E Preferred Stock and the convertible portion of the Loan and the exercise of the Warrant in accordance with its terms, will be duly authorized, validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and the reference to us under the caption "Legal Matters" in the Prospectus. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Our opinion is limited to the Delaware General Corporation Law. We express no opinion as to the effect of the law of any other jurisdiction. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Offering Shares or the Registration Statement. No opinion is expressed herein with respect to the qualification of the Offering Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

Very truly yours,

*/s/ McCarter & English, LLP*

McCarter & English, LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Delcath Systems, Inc. and Subsidiaries on Form S-3 of our report dated March 31, 2021, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, with respect to our audits of the consolidated financial statements of Delcath Systems, Inc. as of December 31, 2020 and 2019 and for the years then ended appearing in the Annual Report on Form 10-K of Delcath Systems, Inc. for the year ended December 31, 2020. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Marcum LLP

Marcum LLP  
New York, NY  
October 5, 2021