



1,918,140 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 1,918,140 shares (the “Shares”) of the Company’s common stock, par value \$0.01 per share (the “Common Stock”), which consist of (i) 1,806,427 shares of Common Stock, (ii) 77,641 shares of Common Stock (the “PIPE Warrant Shares” and together with the 1,806,427 Shares, the “PIPE Securities”) issuable upon the exercise of pre-funded warrants (the “PIPE Warrants”) held by certain Selling Stockholders, and (iii) 34,072 shares of Common Stock that were issued upon the exercise of pre-funded warrants to purchase Common Stock (the “Avenue Amendment Warrants”) previously issued by the Company pursuant to an amendment to the Loan and Security Agreement dated as of March 31, 2023 (the “Amended Avenue Agreement”) with Avenue Venture Opportunities Fund, L.P. (“Avenue”), all of which were exercised. We are registering the offer and sale of the PIPE Securities to satisfy the registration rights they were granted pursuant to a registration rights agreement entered into on March 14, 2024 in connection with the securities purchase agreement entered into on March 14, 2024. We are registering the offer and sale of the shares of Common Stock outstanding upon exercise of the Avenue Amendment Warrants to satisfy the registration rights that were granted pursuant to the Amended Avenue Agreement. While we will not receive any proceeds from the sale of the Shares by the Selling Stockholders, we will receive proceeds from the exercise of any PIPE Warrants for cash.

Our registration of the Shares covered by this prospectus does not mean that the Selling Stockholders will offer or sell any such Shares. The Selling Stockholders may sell Shares 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 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.

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 May 9, 2024, the closing price for our Common Stock, as reported on The Nasdaq Capital Market, was \$5.56 per share. Our common stock outstanding as of April 24, 2024 was 27,784,384. Our principal executive offices are located at 566 Queensbury Avenue, Queensbury, NY 12804.

Investing in these securities involves certain risks. See “[Risk Factors](#)” on page 6 of this prospectus and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.

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 May 9, 2024

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3, which we have filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process. Under this shelf registration process, the Selling Stockholders may from time to time sell the Common Stock described in this prospectus in one or more offerings or otherwise as described under “Plan of Distribution.”

This prospectus may be supplemented from time to time by one or more prospectus supplements. Such prospectus supplements may also add, update or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you must rely on the information in the prospectus supplement. You should carefully read both this prospectus and any applicable prospectus supplement together with additional information described under the heading “Where You Can Find More Information” before deciding to invest in any Common Stock being offered.

Neither we nor the Selling Stockholders have authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any applicable prospectus supplement or any applicable free writing prospectus that we have authorized. We take no responsibility for and can provide no assurance as to the reliability of, any other information that others may give you. The Common Stock is not being offered in any jurisdiction where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus is accurate as of any date other than the respective dates of such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

Unless the context otherwise indicates, references in this prospectus to, “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 6 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 cancers metastatic to the liver. Our lead product, the HEPZATO™ KIT (melphalan for Injection/Hepatic Delivery System), a drug/device combination product, was approved by the US Food and Drug Administration (the “FDA”) on August 14, 2023, with an indication as a liver-directed treatment for adult patients with uveal melanoma with unresectable hepatic metastases affecting less than 50% of the liver and no extrahepatic disease, or extrahepatic disease limited to the bone, lymph nodes, subcutaneous tissues, or lung that is amenable to resection, or radiation. In Europe, the hepatic delivery system is a stand-alone medical device having the same device components as HEPZATO KIT (“HEPZATO”), but without the melphalan hydrochloride and 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 in the liver. The first commercial use of HEPZATO for the treatment of metastatic hepatic dominant uveal melanoma (“mUM”) took place in January 2024.

In the United States, HEPZATO is considered a combination drug and device product and is regulated as a drug by 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 us six orphan drug designations (five for melphalan in the treatment of patients with ocular (uveal) melanoma, cutaneous melanoma, intrahepatic cholangiocarcinoma, hepatocellular carcinoma, and neuroendocrine tumor indications and one for doxorubicin in the treatment of patients with hepatocellular carcinoma).

We have sufficient raw material and component constituent parts of HEPZATO KIT to meet the first year of our anticipated demand and we intend to manage supply chain risk through stockpiled inventory and contracting with multiple suppliers for critical components.

On February 28, 2022, CHEMOSAT received Medical Device Regulation (MDR) certification under the European Medical Devices Regulation (EU) 2017/745, which may be considered by jurisdictions when evaluating reimbursement. As of March 1, 2022, we have assumed direct responsibility for sales, marketing and distribution of CHEMOSAT in Europe.

Our clinical development program for HEPZATO was comprised of the FOCUS Clinical Trial for Patients with metastatic hepatic dominant Uveal Melanoma (the “FOCUS Trial”), a global registration clinical trial that investigated objective response rate in patients with mUM. The current focus of the Company’s clinical development program is to generate clinical data for CHEMOSAT and HEPZATO in patients with mUM, either as monotherapy or in combination with immunotherapy. We expect that this will support increased clinical adoption of and reimbursement for CHEMOSAT in Europe, and to support reimbursement in various jurisdictions, including the United States. In addition to HEPZATO’s use to treat mUM, we believe that CHEMOSAT and HEPZATO has the potential to treat cancers in the liver, such as metastatic colorectal cancer, metastatic neuroendocrine tumors, metastatic breast cancer and intrahepatic cholangiocarcinoma, and we plan to begin one or more studies of HEPZATO KIT to treat such conditions in 2024. We believe that those and similar disease states are areas of unmet medical needs that represent significant market opportunities.

Private Placement

Securities Purchase Agreement

On March 14, 2024, we entered into a securities purchase agreement (the “Securities Purchase Agreement”) with certain accredited investors (each an “Investor” and collectively, the “Investors”) pursuant to which we agreed to sell and issue to the Investors in a private placement (the “Private Placement”) (i) an aggregate of 876,627 shares (the “Shares”) of Common Stock, par value \$0.01 per share (the “Common Stock”), at a purchase price of \$3.72 per share, and (ii) to certain investors, in lieu of shares of Common Stock, 1,008,102 pre-funded warrants (the “Pre-Funded Warrants”) at a price per Pre-Funded Warrant of \$3.71 (the “PIPE Warrant Shares” and together with the Shares, the “PIPE Securities”). The Pre-Funded Warrants will have an exercise price of \$0.01 per share of Common Stock, be immediately exercisable and remain exercisable until exercised in full. Since the closing of the Private Placement, 930,461 of PIPE Warrants have been exercised via cashless exercise, such that we are registering 1,806,427 shares of Common Stock and 77,641 PIPE Warrant Shares.

The Private Placement closed on March 19, 2024. We received gross proceeds from the Private Placement of approximately \$7.0 million, before deducting offering expenses payable by us. We intend to use the net proceeds of the Private Placement for working capital and other general corporate purposes.

Neither the PIPE Warrants issued to the Investors, nor the PIPE Securities were initially registered under the Securities Act or any state securities laws. We have relied on the exemption from the registration requirements of the Securities Act by virtue of Section 4(a)(2) thereof and Rule 506 of Regulation D thereunder. In connection with each Investor’s execution of the Purchase Agreement, such Investor represented to us that it is an “accredited investor” as defined in Regulation D of the Securities Act and that the PIPE Warrants purchased by it were acquired solely for its own account and for investment purposes and not with a view to the future sale or distribution.

Registration Rights Agreement

On March 14, 2024, in connection with the Private Placement, we entered into a Registration Rights Agreement with Investors (the “Registration Rights Agreement”), providing for the registration for resale of the PIPE Securities pursuant to a registration statement (the “Registration Statement”) to be filed with the Securities and Exchange Commission (the “SEC”) on or prior to May 13, 2024. We have agreed to use our best efforts to cause the Registration Statement to be declared effective as soon as possible, but in no event later than 75 days of the closing of the Private Placement (or 120 days in the event of a full review of the Registration Statement by the SEC), and to keep the Registration Statement continuously effective for a period that extends from the first date on which the SEC issues an order of effectiveness in relation to the Registration Statement until such date that all registrable securities (as such term is defined in the Registration Rights Agreement) covered by the Registration Statement have been sold thereunder or pursuant to Rule 144 or may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144.

Term Loan from Avenue

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 for a term loan in an aggregate principal amount of up to \$20.0 million (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.

The initial tranche of the Avenue Loan was \$15.0 million, including \$4.0 million that was funded into a restricted account. Up to \$3.0 million of the principal amount of the Avenue Loan outstanding may be converted, at Avenue’s option, into shares of Common Stock at a conversion price of \$11.98 per share. On March 15, 2023,

the Company returned to Avenue \$4.0 million held in the restricted cash to pay down a portion of the outstanding loan balance, principal payments of \$2.1 million and an incremental 4.25% of the final payment of \$0.2 million. On March 31, 2023, we entered into the Amended Avenue Agreement to defer the interest only period to September 30, 2023, with an additional extension option upon FDA Approval for the HEPZATO KIT and subsequent receipt of at least \$10 million from the sale and issuance of equity securities. On August 14, 2023, the Company received FDA approval and has subsequently received over \$10 million from the exercise of Tranche A Preferred Warrants.

In connection with the initial entry into the Avenue Loan Agreement, we issued warrants to Avenue (the "Initial Avenue Warrant") to purchase 127,755 shares of common stock at an exercise price per share equal to \$0.01. The Initial Avenue Warrant is exercisable until August 31, 2026. The 127,755 shares were registered pursuant to a registration statement on Form S-3 (Registration No. 333-260097). Additionally, in connection with the Avenue Amendment, the Company issued to Avenue the Avenue Amendment Warrants to purchase up to 34,072 shares of Common Stock. 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 Avenue Amendment Warrants. The shares of Common Stock registered hereunder pursuant to the Loan Agreement include only the 34,072 shares of Common Stock outstanding following the exercise, in full, of the Avenue Amendment Warrants.

Corporate Information

We were incorporated in the State of Delaware in August 1988. Our corporate offices are located at 566 Queensbury Avenue, Queensbury, New York 12804. Our telephone number is (212) 489-2100 and our internet address is www.delcath.com. Information contained in, or accessible through, our website does not constitute any part of, and is not incorporated into, this prospectus.

THE OFFERING

This prospectus relates to the resale from time to time by the Selling Stockholders identified in this prospectus of 1,918,140 Shares, which consist of (i) 1,806,427 shares of Common Stock held by the Selling Stockholders; (ii) 77,641 PIPE Warrant Shares (and together with the Shares, the “Securities”) issuable upon the exercise of pre-funded warrants held by the Selling Stockholders; and (iii) 34,072 shares of Avenue Amendment Warrants held by the Selling Stockholders. While we will not receive any proceeds from the sale of the Common Stock by the Selling Stockholders, we will receive proceeds from the exercise of any PIPE Warrants for cash.

Issuer	Delcath Systems, Inc.
Common Stock offered by the Selling Stockholders	(i) 1,840,499 shares of Common Stock and (ii) 77,641 PIPE Warrant Shares issuable upon the exercise of the PIPE Warrants. See “Prospectus Summary – Private Placement” and “Prospectus Summary – Term Loan from Avenue” above and “Selling Stockholders” below.
Common Stock currently outstanding	27,784,384 (as of April 24, 2024)
Common Stock to be outstanding assuming exercise of Warrants not exercised as of April 24, 2024	32,226,855
The Warrants	The PIPE Warrants had a purchase price of \$3.71 per warrant. The exercise price of the PIPE Warrants is \$0.01 per share of Common Stock. The PIPE Warrants are exercisable immediately and for an indefinite term until exercised in full.
Use of Proceeds	<p>We will not receive any of the proceeds from the Shares sold by the Selling Stockholders hereunder. See “The Offering” and “Use of Proceeds” for more details.</p> <p>We intend to use the proceeds from the exercise of the PIPE Warrants for cash for working capital and general corporate purposes. See the section of this prospectus titled “Use of Proceeds.”</p>
Trading Market and Ticker Symbol for Common Stock	Our Common Stock is listed on The Nasdaq Capital Market under the symbol “DCTH.”
Risk Factors	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.

Unless otherwise indicated, all information in this prospectus assumes the exercise of the PIPE Warrants with an exercise price of \$0.01 per share of Common Stock.

RISK FACTORS

Investing in our Common Stock involves a high degree of risk. Before deciding whether to invest in our Common Stock, you should consider carefully the risks and uncertainties discussed in this section and under the sections titled Risk Factors contained in our most recent Annual Report on Form 10-K and in our subsequent 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 or updates to our risk factors reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus, together with other information in this prospectus, the documents incorporated by reference, any prospectus supplement and any free writing prospectus that we may authorize. These risks and uncertainties 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 our SEC filings or any additional risks and uncertainties 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 and you might lose all or part of your investment. Please also read carefully the section titled “Cautionary Note Regarding Forward-Looking Statements.”

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 Section 27A of the Securities Act and Section 21E of the Exchange Act of 1934, as amended (the “Exchange Act”). 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, future revenue and our need for additional financing;
- the commencement of future clinical trials, if any, and the results and timing of those clinical trials;
- our ability to successfully commercialize CHEMOSAT, HEPZATO, and future products, if any, and to generate revenue and successfully obtain reimbursement for the products and/or the associated procedures;
- our sales, marketing and distribution capabilities and strategies, including those relating to commercialization and manufacturing of CHEMOSAT, HEPZATO, and future products, if any;
- the rate and degree of market acceptance and clinical utility of CHEMOSAT, HEPZATO, and future products, if any;
- developments relating to our competitors and our industry;
- the initiation and success of our research and development programs;
- submission and timing of applications for regulatory approval and approval thereof;
- our ability to successfully source components of CHEMOSAT, HEPZATO, and future products, if any, and enter into supplier contracts;
- our ability to source melphalan for use in HEPZATO;
- 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 sale of the Shares covered by this prospectus, except with respect to amounts received by us due to the exercise of any PIPE Warrants for cash. We intend to use the proceeds from the exercise of any PIPE Warrants for cash for working capital and general corporate purposes.

SELLING STOCKHOLDERS

The Common Stock being offered by the Selling Stockholders are those previously issued to the Selling Stockholders, and those issuable to the Selling Stockholders, upon exercise of the PIPE Warrants. For additional information regarding the issuances of those shares of Common Stock and PIPE Warrants, see “Prospectus Summary—Private Placement” and “Prospectus Supplement - Term Loan from Avenue” above. We are registering the Shares in order to permit the Selling Stockholders to offer such shares for resale from time to time.

The table below lists the Selling Stockholders and other information regarding the beneficial ownership of the Common Stock by each of the Selling Stockholders. When we refer to the Selling Stockholders in this prospectus, we are referring to those named below as the Selling Stockholders and, as applicable, any donees, pledgees, assignees, transferees or other successors-in-interest selling the Securities received after the date of this prospectus from the Selling Stockholders as a gift, pledge, or other non-sale related transfer.

The second column lists the number of Common Stock beneficially owned by each selling stockholder, based on its ownership of the Common Stock and the PIPE Warrants, as of April 24, 2024, assuming exercise of the PIPE Warrants held by the Selling Stockholders on that date, without regard to any limitations on exercises.

The third column lists the Common Stock being offered by this prospectus by the Selling Stockholders.

This prospectus generally covers the resale of (A) the sum of (i) the number of Shares issued in the Private Placement and (ii) all PIPE Warrant Shares issuable upon exercise of the PIPE Warrants issued in the Private Placement and (B) the shares of Common Stock underlying the Avenue Amendment Warrants. The fourth column assumes the sale of all of the shares of Common Stock offered by the Selling Stockholders pursuant to this prospectus.

In accordance with the terms of the Registration Rights Agreement, we are required to use commercially reasonable efforts to keep this registration statement continuously effective under the Securities Act until the date that all the PIPE Securities covered by this registration statement (i) have been sold, hereunder or pursuant to Rule 144, or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for us to be in compliance with the current public information requirement under Rule 144. In accordance with the terms of the Loan Agreement, we are required to use commercially reasonable efforts to keep this registration statement continuously effective under the Securities Act until the date that all of the shares of Common Stock issuable upon the exercise of the Avenue Amendment Warrants have been sold thereunder or pursuant to Rule 144.

Under the terms of the PIPE Warrants, a selling stockholder may not exercise the PIPE Warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of Common Stock which would exceed 4.99% or 9.99%, as applicable, of our then outstanding Common Stock following such exercise, excluding for purposes of such determination Common Stock issuable upon

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exercise of the PIPE Warrants which have not been exercised. The number of shares in the second column does not reflect this limitation. The Selling Stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

Name of Selling Stockholder	Total Shares Beneficially Owned Prior to Offering (1)	Maximum Number of Shares to be Sold Pursuant to the Prospectus (2)	Number of Shares Beneficially Owned After Offering (2)	% of Class After Offering*
Gilad Aharon (3)	2,786,053	26,882	2,789,121	9.99%
Steven Salamon (4)	2,780,286	26,882	2,783,429	9.99%
Entities affiliated with Rosalind Advisors, Inc. (5)	2,776,968	619,946	2,845,822	9.99%
Entities Affiliated with Bigger Capital Fund, LP (6)	653,483	134,409	519,074	1.85%
Gerard Michel (7)	1,205,059	40,323	1,164,736	4.1%
David Hoffman (8)	172,228	20,161	152,067	*
Sandra L. Pennell (9)	108,012	26,881	81,131	*
Johnny John, MD (10)	265,031	48,388	216,643	*
Antony T.F. Lundy (11)	902,439	134,408	768,031	2.76%
Vojislav Vukovic (12)	190,342	26,882	163,460	*
Kevin Muir (13)	177,278	13,441	163,837	*
Entities Affiliated with AIGH Capital Management, LLC (14)	2,813,766	738,585	2,075,181	7.47%
HLH Holdings LLC (15)	13,440	13,440	0	*
Woodcourt Capital LLC (16)	13,440	13,440	0	*
Avenue Venture Opportunities Fund, L.P. (17)	412,244	34,072	378,172	1.35%

* 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 April 24, 2024, and the percentage is based upon 27,784,384 shares of our Common Stock outstanding as of April 24, 2024. Unless indicated otherwise, the Selling Stockholder’s address is the Company’s address, which is 566 Queensbury Avenue, Queensbury, NY 12804.
- (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) Includes 30,882 shares of Common Stock and 57,682 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above. Also includes shares eligible to vote owned by Rosalind (defined below), which are described in footnote 5.
- (4) Includes 82,197 shares of Common Stock and 57,682 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above. Also includes shares eligible to vote owned by Rosalind (defined below), which are described in footnote 5.
- (5) Based partially on the Company’s records and in part on information provided on a Statement on Schedule 13D/A filed with the Commission on March 25, 2024 by and on behalf of Rosalind Advisors, Inc., investor Company ITF Rosalind Master Fund L.P., Steven Salamon and Dr. Gilad Aharon (collectively, “Rosalind”), Rosalind beneficially own an aggregate of 2,763,468 shares of Common Stock, 115,364 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, April 24, 2024, 1,418,909 shares of Common Stock issuable upon conversion of 11,986 shares of Preferred Stock, 224,262 shares of Common Stock issuable upon the conversion of certain convertible notes, and 2,332,256 shares of Common Stock issuable upon the exercise of warrants. Rosalind’s shares of Preferred Stock are subject to a 9.99% blocker and Rosalind’s warrants to purchase

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shares of Common Stock are subject to a 4.99% blocker. The address for Rosalind Advisors, Inc. is 15 Wellesley Street West, Suite 326 Toronto, Ontario M4Y 0GY Canada.

- (6) Includes (i) 377,873 shares of Common Stock, (ii) 192,276 shares of Common Stock from a warrant expiring in December 2024, and (iii) 83,334 shares of Common Stock from a warrant expiring in March of 2026. Michael Bigger disclaims beneficial ownership over these securities. Michael Bigger has the power to vote or dispose of the shares owned by District 2 Capital Fund LP. and Bigger Capital Fund, LP. Michael Bigger and Patricia Winter are the trustees of Matthias Bigger—UTMA and the Andreas Bigger Irrevocable Trust Agreement. The Selling Stockholder's address is 11700 W Charleston Blvd 170-659, Las Vegas, NV 89135.
- (7) Includes 302,668 shares of Common Stock held by Mr. Michel and 885,725 shares of Common Stock that may be acquired through the exercise of options and 16,666 shares of Common Stock that may be acquired through the exercise of warrants that are exercisable as of, or will become exercisable within 60 days of, the date above.
- (8) Includes 74,330 shares of Common Stock held by Mr. Hoffman and 97,898 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above.
- (9) Includes 61,052 shares of Common Stock held by Ms. Pennell and 46,960 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above.
- (10) Includes 55,085 shares of Common Stock held by Mr. John and 209,946 shares of Common Stock that may be acquired through the exercise of options that are exercisable through within 60 days of the date above.
- (11) Includes 889,286 shares of Common Stock held by Mr. Lundy and 13,153 shares of Common Stock that may be acquired through the exercise of warrants that are exercisable within 60 days of the date above. The Selling Stockholder's address is 37 Rosedale Road, Toronto, Ontario M4W 2P5, Canada.
- (12) Includes 126,882 shares of Common Stock held by Mr. Vukovic and 63,460 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above.
- (13) Includes 18,582 shares of Common Stock held by Mr. Muir and 158,696 shares of Common Stock that may be acquired through the exercise of options that are exercisable as of, or will become exercisable within 60 days of, the date above.
- (14) Mr. Orin Hirschman is the managing member of AIGH Capital Management, LLC ("AIGH CM"), who is an advisor with respect to the securities held by AIGH Investment Partners, L.P. ("AIGH LP") and sub-advisor with respect to the securities held by WVP Emerging Manager Onshore Fund, LLC—AIGH Series ("WVP AIGH") and WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series ("WVP OE"). Mr. Hirschman is also the managing Member of AIGH Investment Partners, LLC ("AIGH LLC"). Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly held by AIGH LLC. By and on behalf of the aforementioned entities AIGH Investment Partners, LP, WVP Emerging Manager Onshore Fund, LLC – AIGH Series, WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series and AIGH Investment Partners, LLC (collectively, "AIGH Entities"), Mr. Hirschman beneficially owns an aggregate of 2,736,125 shares of Common Stock, and 77,641 warrants to purchase shares of Common Stock subject to a 9.99% blocker. The address for AIGH CM, AIGH LP, WVP AIGH, WVP OE, AIGH LLC and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.
- (15) Mr. Aaron Martin is the Managing Member of HLH Holdings LLC ("HLH"). Mr. Martin has voting and investment control over the securities held by HLH. The address for HLH and Mr. Martin is 2305 Whitley Road, Baltimore MD 21209.
- (16) Mr. Yitzchak Jacobovitz is the Managing Member of Woodcourt Capital LLC ("Woodcourt"). Mr. Jacobovitz has voting and investment control over the securities held by Woodcourt. The address for Woodcourt and Mr. Jacobovitz is 2720 Woodcourt Road, Baltimore MD 21209.
- (17) Based on information provided by Avenue, Avenue beneficially owns an aggregate of (i) 161,827 shares of Common Stock and (ii) 250,417 shares of Common Stock that may be issued to such Selling Stockholder upon the conversion of up to \$3.0 million principal amount of the Loan. Avenue's warrants to purchase

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shares of Common Stock are subject to a 4.99% blocker. The convertible portion of the Avenue Loan may not be converted and the Initial Avenue Warrant and the Avenue Amendment Warrants 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 Avenue Loan or the exercise of the Initial Avenue Warrant or the Avenue Amendment Warrants, 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 Avenue Loan or the exercise of the Initial Avenue Warrant and the Avenue Amendment Warrants.

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. (collectively, "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:

- Gerard Michel, who is the Chief Executive Officer of the Company;
David Hoffman, who is the General Counsel, Corporate Secretary & Chief Compliance Officer of the Company;
- Sandra Pennell, who is the Principal Financial and Accounting Officer of the Company;
- Vojo Vukovic, who is the Chief Medical Officer of the Company;
- Kevin Muir, who is the General Manager of Interventional Oncology of the Company; and
- Johnny John, MD, who is the VP of Clinical Development and Medical Affairs of the Company.

Other than the relationships described above, none of the Selling Stockholders has had a material relationship with us or any of our predecessors or affiliates within the past three years, other than as a result of the ownership of our shares of Common Stock or other securities.

PLAN OF DISTRIBUTION

Each Selling Stockholder, or the Selling Stockholders, of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the principal trading market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker dealer solicits purchasers;
- block trades in which the broker dealer will attempt to sell the securities 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;
- in transactions through broker dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through 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 may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but except as set forth in a supplements to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the Selling Stockholder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholder may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities 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 securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

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We are required to pay certain fees and expenses that we incur incident to the registration of the Securities covered by this prospectus. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective continuously effective under the Securities Act until the date that all the Securities being offered by the Selling Stockholders (i) have been sold pursuant to this registration statement or pursuant to Rule 144, or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for us to be in compliance with the current public information requirement under Rule 144. The Securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

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 Cooley LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements as of December 31, 2023 and 2022 and for each of the two years in the period ended December 31, 2023 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

This prospectus is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>.

You may also access our SEC filings at our website www.delcath.com. Our website and the information contained on, or that can be accessed through, our website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on our website or any such information in making your decision whether to purchase our securities.

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, 2023, filed with the SEC on March 26, 2024, including those portions of the Form 10-K incorporated by reference from our [definitive proxy statement](#) filed with the SEC on April 12, 2024;
- our Current Reports on [Form 8-K](#), filed with the SEC on April 26, 2024; 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 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., 566 Queensbury Avenue, Queensbury, NY 12804.

* * *



**1,918,140 Shares of
Common Stock Offered by the Selling Stockholders**

PROSPECTUS

May 9, 2024
