

PROSPECTUS SUPPLEMENT NO. 1
(To Prospectus Dated June 28, 2023)



Up to 19,509,302 Shares of Common Stock Offered by the Selling Stockholders

This Prospectus Supplement No. 1 (this “Prospectus Supplement”) is being filed to update and supplement the information contained in the “Selling Stockholders” section of the Delcath Systems, Inc. (the “Company”) prospectus, dated June 14, 2023 (as may be amended and supplemented from time to time, the “Prospectus”). The Prospectus, as supplemented by this Prospectus Supplement, relates to the offer and resale from time to time by certain selling stockholders named in the Prospectus of up to 19,509,302 shares of Company’s common stock, par value \$0.01 per share (the “Common Stock”), which consist of (i) 2,915,908 shares of Common Stock, issuable upon conversion of 9,622 shares of Series F-2 Convertible Preferred Stock, par value \$0.01 per share (the “Series F-2 Preferred Stock”), (ii) 7,746,437 shares of Common Stock issuable upon conversion of 34,860 shares of F-3 Preferred Stock exercisable pursuant to the preferred stock tranche A warrants (the “Preferred Tranche A Warrant”) to acquire shares of Series F-3 Preferred Stock, par value \$0.01 per share (the “Series F-3 Preferred Stock”), (iii) 4,149,995 shares of Common Stock issuable upon conversion of 24,900 shares of F-4 Preferred Stock exercisable pursuant to the preferred stock tranche B warrants (the “Preferred Tranche B Warrant,” together with the Preferred Tranche A Warrant, the “Preferred Warrants”) to acquire shares of Series F-4 Preferred Stock, par value \$0.01 per share (the “Series F-4 Preferred Stock” and together with the Series F-3 Preferred Stock, the “Preferred Warrant Shares”), (iv) 4,649,186 shares of Common Stock, (v) 31,110 shares of Common Stock, issuable upon exercise of the common stock tranche A warrants (“Common Tranche A Warrant”), and (vi) 16,666 shares of Common Stock issuable upon exercise of common stock tranche B warrants (the “Common Tranche B Warrant”, together with the Common Tranche A Warrant, the “Common Warrants,” and together with the Preferred Warrants, the “Warrants”).

This Prospectus Supplement is being filed to amend the selling stockholder information set forth in the Prospectus as set forth on [Annex A](#) attached hereto. This Prospectus Supplement should be read in conjunction with the Prospectus and if there is any inconsistency in the information in the Prospectus and this Prospectus Supplement, you should rely on the information in this Prospectus Supplement. This Prospectus Supplement is not complete without, and may not be delivered or used except in connection with, the Prospectus.

Our Common Stock is listed on The Nasdaq Capital Market under the symbol “DCTH.” On August 31, 2023, the closing price for our Common Stock, as reported on The Nasdaq Capital Market, was \$4.59 per share.

Investing in our securities involves certain risks. See “Risk Factors” on page 6 of the Prospectus. See also “Risk Factors” contained in any amendments or supplements to the Prospectus and in the documents incorporated by reference in the Prospectus.

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

The date of this Prospectus Supplement is September 1, 2023.

ANNEX A
AMENDMENT TO SELLING STOCKHOLDER INFORMATION

This Prospectus Supplement is being filed in connection with certain changes to the selling stockholder information as set forth in the Prospectus (as supplemented to date, the “Prospectus”) resulting from (1) the sale by Logos Global Master Fund LP of 3,375 Preferred Tranche A Warrants and 4,500 Preferred Tranche B Warrants to Armistice Capital Master Fund Ltd. (“Armistice”) and (2) the sale by Logos Opportunities Fund III LP of 1,125 Preferred Tranche A Warrants and 1,500 Preferred Tranche B Warrants to Armistice (collectively, the “Warrant Transfer”). Consequently, the selling stockholder table (the “Selling Stockholder Table”) appearing under the heading “Selling Stockholders” in the Prospectus is hereby supplemented and amended by: (1) updating the number of shares of Common Stock beneficially owned and registered for sale by the Logos Entities (as defined below) in the Selling Stockholder Table and related footnote (4) as a result of the Warrant Transfer, (2) adding the number of shares of Common Stock beneficially owned and registered for sale by Armistice Capital Master Fund Ltd. to the Selling Stockholder Table, including related footnote (15) as a result of the Warrant Transfer, and (3) updating footnote (1) to the Selling stockholder Table to give effect to the Warrant Transfer.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the Common Stock by each of the selling stockholders. The second column lists the number of Common Stock beneficially owned by each selling stockholder, based on its beneficial ownership of shares of Common Stock, as of June 5, 2023, except with respect to the Common Stock beneficially owned by the Logos Entities and Armistice, which reflects the Warrant Transfer subsequent to June 5, 2023 and assuming exercise of the Warrants held by the selling stockholders on that date. The fourth column lists the shares of Common Stock being offered by the Prospectus by the selling stockholders.

This Prospectus generally covers the resale of the sum of (i) the aggregate number of shares of Common Stock issued or issuable to the selling stockholders as a result of conversion of the Series F-1 Preferred Stock and/or Series F-2 Preferred Stock, (ii) the number of shares of Common Stock issued pursuant to the Common Purchase Agreement and (iii) the number of shares of Common Stock issuable upon exercise of the Warrants (and conversion, if necessary, of the Preferred Warrant Shares). The fourth column assumes the sale of all of the shares of Common Stock offered by the selling stockholders pursuant to this Prospectus.

Pursuant to the Certificate of Designation of Preferences, Rights and Limitations of the Series F Convertible Voting Preferred Stock, a selling stockholder shall not have the right to convert any portion of the Series F Preferred Stock and such Series F Preferred Stock shall not be automatically converted, to the extent that after giving effect to such conversion, such selling stockholder, together with its affiliates, any other persons acting as a group together, and any other persons whose beneficial ownership of Common Stock would be aggregated with the selling stockholder’s and the other attribution parties for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), would beneficially own in excess of 9.99% of the shares of Common Stock outstanding immediately after giving effect to such conversion, excluding for purposes of such determination shares of Common Stock which would be issuable upon exercise of the remaining, unconverted portion of the Series F Preferred Stock beneficially owned. Under the terms of the Common Warrants, a selling stockholder may not exercise the Warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties for purposes of Section 13(d) of the Exchange Act, to beneficially own a number of shares of Common Stock which would exceed 9.99% of our then outstanding Common Stock following such exercise, excluding for purposes of such determination Common Stock issuable upon exercise of the Warrants which have not been exercised.

The information in the following table has been provided to us by or on behalf of the selling stockholders and the selling stockholders may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. The selling stockholders may sell all, some or none of their shares of Common Stock in this offering. See “Plan of Distribution” in the Prospectus.

<u>Name of Selling Stockholder</u>	<u>Total Shares of Common Stock Beneficially Owned Prior to Offering (1)</u>	<u>% of Shares of Common Stock Beneficially Owned Prior to Offering (1)</u>	<u>Maximum Number of Shares of Common Stock to be Sold Pursuant to the Prospectus (2)</u>	<u>Number of Shares of Common Stock Beneficially Owned After Offering (2)</u>	<u>% of Shares of Common Stock Beneficially Owned After Offering*</u>
Vivo Opportunity Fund Holdings, L.P. (3)	1,178,787	9.99%	4,880,741	—	—
Entities affiliated with Logos Capital (4)	1,178,787	9.99%	2,880,351	—	—
Entities affiliated with BVF Partners (5)	1,178,787	9.99%	4,880,044	—	—
Entities affiliated with Rosalind Advisors, Inc. (6)	1,178,787	9.99%	1,678,736	3,010,009	9.99%
Stonepine Capital, LP (7)	976,008	8.42%	976,008	—	—
Mitchell Robbins (8)	1,178,787	9.99%	701,812	1,025,000	3.40%
Serrado Opportunity Fund LLC (9)	468,484	4.22%	468,484	—	—
Bigger Capital Fund, LP (10)	663,709	5.88%	195,200	468,509	1.55%
District 2 Capital Fund LP (11)	390,550	3.55%	195,200	157,222	*
ADAR1 Partners, LP (12)	400,497	3.63%	390,403	10,094	*
Triple Gate Partners, LP (13)	512,380	4.60%	195,200	317,176	1.05%
Gerard Michael (14)	870,867	7.58%	67,423	803,444	2.67%
Armistice Capital, LLC (15)	1,178,787	9.99%	2,000,000	—	—

* 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 June 5, 2023, except with respect to the shares beneficially owned by the Logos Entities and Armistice, which reflects the Warrant Transfer subsequent to June 5, 2023, and the percentage is based upon 10,620,930 shares of our Common Stock outstanding as of June 5, 2023. In computing the number of shares of our Common Stock beneficially owned by a selling stockholder and the percentage ownership of such selling stockholder, we deemed outstanding shares of Common Stock issuable upon the exercise (and conversion, if applicable) of the Warrants and Series F-2 Preferred Stock, held by that selling stockholder on June 5, 2023. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other selling stockholder.
- (2) Assumes sale of all shares of Common stock covered by the Prospectus and no further acquisitions of shares of Common Stock by the selling stockholders.
- (3) Consists of 1,178,787 shares of Common Stock. In addition to the foregoing shares of Common Stock, as of June 5, 2023, Vivo Opportunity Fund Holdings, L.P. held (i) 715,454 shares of Common Stock issuable upon conversion of 2,361 shares of Series F-2 Preferred Stock, (ii) 1,944,666 shares of Common Stock issuable upon conversion of 8,751 shares of Series F-3 Preferred Stock and (iii) 1,041,833 shares of Common Stock issuable upon conversion of 6,251 shares of Series F-4 Preferred Stock that are not included in the shares reported under “Total Shares of Common Stock Beneficially Owned Prior to Offering” because they are subject to limitations on exercisability if such exercise would result in Vivo Opportunity Fund Holdings, L.P. beneficially owning more than 9.99% of our outstanding Common Stock. Vivo Opportunity, LLC is the general partner of Vivo Opportunity Fund Holdings, L.P. and Gaurav Aggarwal, Kevin Dai, Hongbo Lu, Frank Kung and Michael Chang are the voting members of Vivo Opportunity, LLC. The selling stockholder’s address is c/o Vivo Capital LLC, 192 Lytton Avenue, Palo Alto, CA 94301.
- (4) Consists of 884,090 shares of Common Stock held by Logos Global Master Fund, LP (“Logos Global”) and 294,697 shares of Common Stock held by Logos Opportunities Fund III, LP (“Logos Opportunities”, and together with Logos Global, the “Logos Entities”). In addition to the foregoing shares of Common Stock, as of June 5, 2023, (i) Logos Global held 536,666 shares of Common Stock issuable upon conversion of 1,771 shares of Series F-2 Preferred Stock, 708,444 shares of Common Stock issuable upon conversion of 3,188 shares of Series F-3 Preferred Stock and 31,333 shares of Common Stock issuable upon conversion of 188 shares of Series F-4 Preferred Stock and (ii) Logos Opportunities held 178,787 shares of Common Stock issuable upon conversion of 590 shares of Series F-2 Preferred Stock, 236,000 shares of Common Stock issuable upon conversion of 1,062 shares of Series F-3 Preferred Stock and 10,333 shares of Common Stock issuable upon conversion of 62 shares of Series F-4 Preferred Stock that are not included in the shares reported under “Total Shares of Common Stock Beneficially Owned Prior to Offering” because they are subject to limitations on exercisability if such exercise would result in the Logos Entities beneficially owning more than 9.99% of our outstanding Common Stock.

- (5) Consists of 630,303 shares of Common Stock held by Biotechnology Value Fund, L.P. (“BVF LP”), 481,515 shares of Common Stock held by Biotechnology Value Fund II, L.P. (“BVF2 LP”), 51,515 shares of Common Stock held by Biotechnology Value Trading Fund OS LP (“BVF OS”) and 15,454 shares of Common Stock held by MSI BVF SPV, LLC (“MSI BVF”, and together with BVF LP, BVF2 LP and BVF OS, the “BVF Entities”). In addition to the foregoing shares of Common Stock, as of June 5, 2023, (i) BVF LP held 381,818 shares of Common Stock issuable upon conversion of 1,260 shares of Series F-2 Preferred Stock, 1,039,111 shares of Common Stock issuable upon conversion of 4,676 shares of Series F-3 Preferred Stock and 556,666 shares of Common Stock issuable upon conversion of 3,340 shares of Series F-4 Preferred Stock, (ii) BVF2 LP held 288,181 shares of Common Stock issuable upon conversion of 951 shares of Series F-2 Preferred Stock, 790,222 shares of Common Stock issuable upon conversion of 3,556 shares of Series F-3 Preferred Stock and 423,333 shares of Common Stock issuable upon conversion of 2,540 shares of Series F-4 Preferred Stock, (iii) BVF OS held 36,363 shares of Common Stock issuable upon conversion of 120 shares of Series F-2 Preferred Stock, 90,222 shares of Common Stock issuable upon conversion of 406 shares of Series F-3 Preferred Stock and 48,333 shares of Common Stock issuable upon conversion of 290 shares of Series F-4 Preferred Stock and (iv) MSI BVF held 8,787 shares of Common Stock issuable upon conversion of 29 shares of Series F-2 Preferred Stock, 24,888 shares of Common Stock issuable upon conversion of 112 shares of Series F-3 Preferred Stock and 13,333 shares of Common Stock issuable upon conversion of 80 shares of Series F-4 Preferred Stock, certain of which are not included in the shares reported under “Total Shares of Common Stock Beneficially Owned Prior to Offering” because they are subject to limitations on conversion if such conversion would result in the BVF Entities beneficially owning more than 9.99% of our outstanding Common Stock. BVF I GP LLC is the general partner of BVF LP. BVF II GP LLC is the general partner of BVF2 LP. BVF Partners OS Ltd. is the general partner of BVF OS. BVF GP Holdings is the sole member of BVF I GP LLC and BVF II GP LLC. BVF Partners L.P. is the sole member of BVF Partners OS Ltd. and investment manager of BVF LP, BVF2 LP, BVF OS and MSI BVF. BVF Inc. is the general partner of BVF Partners L.P. Mark N. Lampert is director and officer of BVF Inc. Each of BVF I GP LLC, BVF II GP LLC, BVF Partners OS Ltd., BVF GP Holdings LLC, BVF Partners L.P. BVF Inc. and Mr. Lampert disclaims beneficial ownership of securities beneficially owned by the selling stockholders. The selling stockholder’s address is c/o BVF Partners L.P., 44 Montgomery St, 40th Floor, San Francisco, CA 94104.
- (6) Consists of 938,828 shares of Common Stock and 239,959 shares of Common Stock held by entities affiliated with Rosalind Advisors, Inc. which includes Rosalind Opportunities Fund I L.P. and Rosalind Master Fund L.P. (“Rosalind”) issuable upon exercise of 239,959 warrants (the “Rosalind Warrants”). In addition to the foregoing shares of Common Stock, as of June 5, 2023, Rosalind held (i) an aggregate of 219,180 shares of Common Stock issuable upon the conversion of an aggregate 2,192 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 (ii) 914,865 shares of Common Stock issuable upon conversion of 9,148 shares of Series E Preferred Stock, (iii) an aggregate of 175,256 shares of Common Stock issuable upon the conversion of an aggregate 1,752 shares of Series E-1 Preferred Stock, (iv) 480,006 shares of Common Stock issuable upon exercise of the Rosalind Warrants, (v) 651,515 shares of Common Stock issuable upon conversion of 2,150 shares of Series F-2 Preferred Stock, (vi) 668,888 shares of Common Stock issuable upon conversion of 3,010 shares of Series F-3 Preferred Stock and (vii) 358,333 shares of Common Stock issuable upon conversion 2,150 shares of Series F-4 Preferred Stock. The foregoing clauses (i) through (vii) reflect securities convertible into shares of Common Stock, all of which are subject to a beneficial ownership blocker that otherwise limits their ability to exercise or convert such security if such exercise would result in beneficially owning more than 9.99% of our outstanding Common Stock and therefore such securities are not included in the shares reported under “Total Shares of Common Stock Beneficially Owned Prior to Offering.” 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. The selling stockholder’s address is c/o Rosalind Advisors, Inc., 15 Wellesley Street West, Suite 326, Toronto, ON M4Y 0G7.
- (7) Consists of (i) 378,787 shares of Common Stock, (ii) 388,888 shares of Common Stock issuable upon conversion of 1,750 shares of Series F-3 Preferred Stock and (iii) 208,333 shares of Common Stock issuable upon conversion of 1,250 shares of Series F-4 Preferred Stock. The selling stockholder’s address is Stonepine Capital Management, Attn: Jeff Nunnenkamp, 919 NW Bond Street, Suite 204, Bend, OR 97703.
- (8) Consists of 1,178,787 shares of Common Stock. In addition to the foregoing shares of Common Stock, as of June 5, 2023, Mitchell Robbins held (i) 118,787 shares of Common Stock issuable upon conversion of 392 shares of Series F-2 Preferred Stock, (ii) 279,555 shares of Common Stock issuable upon conversion of 1,258 shares of Series F-3 Preferred Stock and (iii) 149,833 shares of Common Stock issuable upon conversion of 899 shares of Series F-4 Preferred Stock that are not included in the shares reported under “Total Shares of Common Stock Beneficially Owned Prior to Offering” because they are subject to limitations on exercisability if such exercise would result in Mitchell Robbins beneficially owning more than 9.99% of our outstanding Common Stock. The selling stockholder’s address is 461 South Maya Palm Drive, Boca Raton, FL 33432.

- (9) Consists of (i) 181,818 shares of Common Stock, (ii) 186,666 shares of Common Stock issuable upon conversion of 840 shares of Series F-3 Preferred Stock and (iii) 100,000 shares of Common Stock issuable upon conversion of 600 shares of Series F-4 Preferred Stock. The selling stockholder's address is Serrado Capital LLC (c/o Stewart Hen), 40 Worth Street, Suite 702, New York, NY 10013.
- (10) Consists of (i) 386,712 shares of Common Stock, (ii) 77,777 shares of Common Stock issuable upon conversion of 350 shares of Series F-3 Preferred Stock, (iii) 41,666 shares of Common Stock issuable upon conversion of 250 shares of Series F-4 Preferred Stock and (iv) 157,554 shares of Common Stock which may be acquired upon exercise of certain common stock warrants. Michael Bigger has the power to vote or dispose of the shares owned by Bigger Capital Fund, LP, 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. Michael Bigger disclaims beneficial ownership over these securities.
- (11) Consists of (i) 236,385 shares of Common Stock, (ii) 34,722 shares of Common Stock which may be acquired upon exercise of certain common stock warrants, (iii) 77,777 shares of Common Stock issuable upon conversion of 350 shares of Series F-3 Preferred Stock and (iv) 41,666 shares of Common Stock issuable upon conversion of 250 shares of Series F-4 Preferred Stock. Michael Bigger has the power to vote or dispose of the shares owned by District 2 Capital Fund LP. The selling stockholder's address is 14 Wall Street, 2nd Floor, Huntington, New York 11743. Michael Bigger disclaims beneficial ownership over these securities.
- (12) Consists of (i) 161,608 shares of Common Stock, (ii) 155,555 shares of Common Stock issuable upon conversion of 700 shares of Series F-3 Preferred Stock and (iii) 83,333 shares of Common Stock issuable upon conversion of 500 shares of Series F-4 Preferred Stock. The selling stockholder's address is 3503 Wild Cherry Drive, Building 9, Austin, TX 78738.
- (13) Consists of (i) 392,935 shares of Common Stock, (ii) 77,777 shares of Common Stock issuable upon conversion of 350 shares of Series F-3 Preferred Stock and (iii) 41,667 shares of Common Stock issuable upon conversion of 250 shares of Series F-4 Preferred Stock. The selling stockholder's address is 445 Central Ave, Suite 317, Cedarhurst, NY 11516.
- (14) Consists of (i) 177,589 shares of Common Stock, (ii) 645,502 shares of Common Stock that may be acquired through the exercise of options, (iii) 47,776 shares of Common Stock, issuable upon exercise of the Common Warrants.
- (15) The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the "Master Fund"), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC ("Armistice Capital"), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. Consists of (i) 1,000,000 shares of Common Stock issuable upon conversion of 4,500 shares of Series F-3 Preferred Stock and (ii) 1,000,000 shares of Common Stock issuable upon conversion of 6,000 shares of Series F-4 Preferred Stock, of which 1,787,787 shares are reported under "Total Shares of Common Stock Beneficially Owned Prior to Offering" pursuant to limitations on exercisability if such exercise would result in Armistice Capital or its affiliates beneficially owning more than 9.99% of our outstanding Common Stock. The selling stockholder's address is 510 Madison Avenue, 7th Floor, New York, NY 10022.