

Prospectus Supplement No. 2
(to Prospectus dated July 16, 2015)

DELCATH SYSTEMS, INC.

9,350,000 Units
Consisting of 9,350,000 Shares of Common Stock
and
7,012,500 Series A Warrants to Purchase 7,012,500 Shares
of Common Stock
and
9,350,000 Series B Warrants to Purchase 9,350,000 Shares of
Common Stock and 7,012,500 Series A Warrants

This prospectus amends and supplements the prospectus dated July 16, 2015 (the "Prospectus"), which forms a part of our Registration Statement on Form S-1 (Registration Statement No. 333-204979). This prospectus supplement is being filed to update and supplement the information included or incorporated by reference in the prospectus with the information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 14, 2015 (the "Form 8-K"). Accordingly, we have attached the Form 8-K to this prospectus supplement.

The prospectus and this prospectus supplement relate to the issuance of shares of our common stock and Series A Warrants upon the exercise of Series A Warrants and Series B Warrants issued in connection with our offering of units consisting of common stock, Series A Warrants and Series B Warrants on July 16, 2015.

Our common stock is traded on The Nasdaq Capital Market under the symbol "DCTH". Neither series of warrants will trade on The Nasdaq Capital Market or any other securities exchange or trading market. On August 13, 2015, the closing price for a share of our common stock on The Nasdaq Capital Market was \$0.52 per share.

Investing in our Common Stock involves risks. See "Risk Factors" beginning on page 9 of the Prospectus to read about factors you should consider before you make your investment decision.

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

The date of this Prospectus Supplement No. 2 is August 14, 2015

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

FORM 8-K

**CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Date of report (Date of earliest event reported): **August 11, 2015**

DELCATH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-16133
(Commission File Number)

06-1245881
(IRS Employer
Identification Number)

1301 Avenue of the Americas, 43rd Floor, New York, New York 10019
(Address of principal executive offices, including zip code)

(212) 489-2100
(Registrant's telephone number, including area code)

NONE
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 3.01. Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing.

On August 11, 2015, Delcath Systems, Inc. (the “Company”) received a notification letter (the “Notice”) from The NASDAQ Stock Market (“NASDAQ”) advising the Company that for 30 consecutive trading days preceding the date of the Notice, the bid price of the Company’s common stock had closed below the \$1.00 per share minimum required for continued listing on The NASDAQ Capital Market pursuant to NASDAQ Marketplace Rule 5550(a)(2) (the “Minimum Bid Price Rule”).

The Notice has no effect on the listing of the Company’s common stock at this time and the Company’s common stock will continue to trade on The NASDAQ Capital Market under the symbol “DCTH.”

The Notice also stated that the Company will be provided 180 calendar days, or until February 8, 2016, to regain compliance with the Minimum Bid Price Rule. To do so, the bid price of the Company’s common stock must close at or above \$1.00 per share for a minimum of ten consecutive business days prior to that date.

If, by February 8, 2016, the Company cannot demonstrate compliance with Marketplace Rule 5550(a)(2), then the NASDAQ staff will determine whether or not the Company meets The NASDAQ Capital Market initial listing criteria set forth in NASDAQ Marketplace Rule 5550, except for the bid price requirement.

If the Company meets the initial listing criteria (with the exception of the bid price requirement) and provides written notice of its intention to cure the deficiency during the second compliance period, the NASDAQ staff will notify the Company that it has been granted an additional 180 calendar day compliance period.

If the Company is not eligible for an additional 180-day compliance period, the NASDAQ staff will provide written notice that the Company’s securities will be delisted. At that time, the Company may appeal the NASDAQ staff’s determination to delist its securities to a Listing Qualifications Panel.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

DELCATH SYSTEMS, INC.

Dated: August 14, 2015

By: /s/ Jennifer K. Simpson, Ph.D.

Name: Jennifer K. Simpson, Ph.D

Title: President and Chief Executive Officer