|X|

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 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.)

1301 Avenue of the Americas 43rd Floor New York, New York 10019 (Address of Principal Executive Offices) (Zip Code)

Delcath Systems, Inc. 2009 Stock Incentive Plan, as amended (Full title of the plan)

Jennifer K. Simpson
President and Chief Executive Officer
Delcath Systems, Inc.
1301 Avenue of the Americas
43rd Floor
New York, New York 10019
(212) 489-2100

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

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

 Large accelerated filer
 □
 Accelerated filer

 Non-accelerated filer
 □ (Do not check if a small reporting company)
 Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee(3)		
Common Stock (\$.01 par value)	1,100,000 shares	\$1.26	\$1,386,000	\$161.05		

- Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement covers, in addition to the number of shares of common stock, par value \$.01 per share ("Common Stock") of the Registrant stated above, an indeterminate number of additional shares of Common Stock which may become issuable under the Registrant's 2009 Stock Incentive Plan, as amended (the "Plan") by reason of certain corporate transactions or events, including any stock dividend, stock split or any other similar transaction effected which results in an increase in the number of the Registrant's outstanding shares of Common Stock.
- (2) The fee is based solely on the 1,100,000 shares of Common Stock newly available for issuance under the Plan and is estimated in accordance with paragraphs (c) and (h) of Rule 457 under the Securities Act solely for purposes of calculating the registration fee and based upon the average of the high and low prices of the Common Stock reported by the Nasdaq Capital Market on June 8, 2015.
- (3) The registration fee has been calculated pursuant to Section 6(b) of the Securities Act by multiplying 0.0001162 by the proposed maximum aggregate offering price (as computed in accordance with Rule 457 under the Securities Act solely for the purpose of determining the registration fee of the securities registered hereby).

Explanatory Note

This Registration Statement on Form S-8 ("Registration Statement") is filed pursuant to General Instruction E to Form S-8 for the purpose of registering an additional 1,100,000 shares of the common stock, par value \$0.01 per share, of Delcath Systems, Inc. (the "Company" or "Registrant"), which may be issued pursuant to awards under the Plan. In accordance with General Instruction E to Form S-8, the Company hereby incorporates herein by reference the contents of the prior registration statements on Form S-8 filed by the Company with respect to the Plan on May 19, 2010 (Registration No. 333-166956) and June 8, 2012 (Registration No. 333-182014), together with all exhibits filed therewith or incorporated therein by reference to the extent not otherwise amended or superseded by the contents of this Registration Statement.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

- 5.1 Opinion of Morgan, Lewis & Bockius LLP
- 23.1 Consent of Morgan, Lewis & Bockius LLP (included in Exhibit 5.1)
- 23.2 Consent of Ernst & Young LLP
- 99.1 Delcath Systems, Inc. 2009 Stock Incentive Plan, as amended (incorporated by reference to Annex A to the Registrant's proxy statement on Schedule 14-A, filed April 29, 2015)

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-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in City of New York, State of New York on the 10th day of June, 2015.

DELCATH SYSTEMS, INC.

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

Jennifer K. Simpson, Ph.D. President and Chief Executive Officer

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.

SIGNATURE	<u>TITLE</u>	DATE
/s/ Jennifer K. Simpson, Ph.D. Jennifer K. Simpson, Ph.D.	President and Chief Executive Officer (Principal Executive Officer)	June 10, 2015
/s/ Barbra C. Keck, M.B.A. Barbra C. Keck, M.B.A.	Senior Vice President, Finance (Principal Financial Officer and Principal Accounting Officer)	June 10, 2015
/s/ Roger G. Stoll, Ph.D. Roger G. Stoll, Ph.D.	Executive Chairman of the Board	June 10, 2015
/s/ Harold S. Koplewicz, M.D. Harold S. Koplewicz, M.D.	Director	June 10, 2015
/s/ Dennis H. Langer, M.D., J.D. Dennis H. Langer, M.D., J.D.	Director	June 10, 2015
/s/ Laura A. Philips, Ph.D., M.B.A. Laura A. Philips, Ph.D., M.B.A.	Director	June 10, 2015
William D. Rueckert	Director	
/s/ Marco Taglietti, M.D. Marco Taglietti, M.D.	Director	June 10, 2015

June 10, 2015

Delcath Systems, Inc. 1301 Avenue of the Americas 43rd Floor New York, New York 10019

Re: Delcath Systems, Inc., Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Delcath Systems, Inc., a Delaware corporation (the "Company"), in connection with the filing of the referenced Registration Statement (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), with the Securities and Exchange Commission (the "Commission"). The Registration Statement relates to the proposed offering and sale of up to 1,100,000 shares of Common Stock, par value \$0.01 per share, of the Company (the "Shares").

In connection with this opinion letter, we have examined and relied on originals or copies, certified or otherwise identified to our satisfaction, of (i) the Registration Statement, (ii) the Certificate of Incorporation and By-laws of the Company, (iii) certain resolutions of the Board of Directors of the Company relating to the filing of the Registration Statement and certain related matters, (iv) the Final Report of the Inspector of Election of the Company's 2015 Annual Meeting of Shareholders, reflecting the approval of the amendment of the Company's 2009 Stock Incentive Plan (the "Plan") to increase the total number of Shares reserved for issuance under the Plan by 1,100,000 (Proposal No. 4) by a majority of the votes cast in person or by proxy at such meeting, and (v) such other documents, records and other instruments as we have deemed appropriate for the purposes of the opinion set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies and the authenticity of the originals of all documents submitted to us as copies.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized by the Company and, when issued by the Company and transferred to plan participants in accordance with the Plan, will be validly issued, fully paid and non-assessable.

We render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than, the Delaware General Corporation Law and reported judicial decision relating thereto.

Page 2

We hereby consent to the use of this opinion as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the Commission thereunder.

Very truly yours,

/s/ Morgan, Lewis & Bockius LLP

MORGAN, LEWIS & BOCKIUS LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Delcath Systems, Inc. 2009 Stock Incentive Plan, as amended of our reports dated March 11, 2015, with respect to the consolidated financial statements of Delcath Systems, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2014, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

MetroPark, New Jersey June 10, 2015