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

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**FORM S-3**

**REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

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**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.)**

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**600 Fifth Avenue, 23<sup>rd</sup> Floor  
New York, NY 10020  
(212) 489-2100**  
(Address, including zip code, and telephone number,  
including area code, of Registrant's principal executive offices)

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**Richard L. Taney  
Chief Executive Officer  
Delcath Systems, Inc.  
600 Fifth Avenue, 23<sup>rd</sup> Floor  
New York, NY 10020  
(212) 489-2100**  
(Name, address, including zip code, and telephone number,  
including area code, of agent for service)

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**Copies to:**

**Gary J. Simon  
Hughes Hubbard & Reed LLP  
One Battery Park Plaza  
New York, NY 10004  
(212) 837-6000**

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- (4) Includes common stock purchase rights which are attached to, and trade and transfer with, the common stock. Prior to the occurrence of certain events, such rights will not be exercisable or evidenced separately from the common stock.
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**EXPLANATORY NOTE AND INCORPORATION BY REFERENCE OF SELECTED INFORMATION**

This registration statement is being filed with respect to the registration pursuant to Rule 462(b) under the Securities Act of 1933, as amended, of additional shares of common stock, par value \$0.01 per share, of Delcath Systems, Inc. and warrants to purchase such common stock previously registered under an earlier effective registration statement (No. 333-143280), the contents of which are incorporated by reference into this registration statement.

The required opinions and consents are listed on an Exhibit Index attached hereto and 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, NY, on June 3, 2009.

### DELCATH SYSTEMS, INC.

By: /s/ Richard L. Taney

Richard L. Taney  
Chief Executive Officer

### POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Richard L. Taney, and each or any one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and to sign any and all additional registration statements relating to the Registration Statement and filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent or his substitute or substitutes, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Richard L. Taney</u> Richard L. Taney	Chief Executive Officer and Director (principal executive officer)	June 3, 2009
<u>/s/ Barbra Keck</u> Barbra Keck	Controller (principal financial and accounting officer)	June 3, 2009
<u>/s/ Harold S. Koplewicz</u> Harold S. Koplewicz, M.D.	Chairman of the Board	June 3, 2009
<u>/s/ Laura Philips</u> Laura Philips, Ph.D.	Director	June 3, 2009

Signature

Title

Date

/s/ Eammonn Hobbs

Eammonn Hobbs

Director

June 3, 2009

/s/ Robert Ladd

Robert Ladd

Director

June 3, 2009

/s/ Pamela Contag

Pamela Contag

Director

June 3, 2009

/s/ Roger Stoll

Roger Stoll

Director

June 3, 2009

**EXHIBIT INDEX**

<b><u>Exhibit Number</u></b>	<b><u>Description of the Document</u></b>
5.1	Opinion of Hughes Hubbard & Reed LLP as to the legality of the securities being registered.
23.1	Consent of CCR LLP
23.2	Consent of Hughes Hubbard & Reed LLP (included in Exhibit 5.1).

June 9, 2009

Delcath Systems, Inc.  
600 Fifth Avenue, 23<sup>rd</sup> Floor  
New York, NY 10020

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Delcath Systems, Inc. (the "Company") in connection with your authorization of the proposed issuance of up to \$27,966 aggregate offering price of (i) shares (the "Shares") of common stock, par value \$0.01 per share ("Common Stock"), of the Company, (ii) warrants (the "Warrants") to purchase shares of Common Stock and (iii) the shares of Common Stock issuable upon exercise of the Warrants (the "Warrant Shares") as contemplated by the Registration Statement on Form S-3 covering such proposed issuance (the "Registration Statement") initially filed with the Securities and Exchange Commission under the Securities Act of 1933 (the "Act") on or about the date hereof

In connection with the foregoing, we have examined: the Registration Statement and originals, or copies certified or otherwise identified to our satisfaction, of such other documents, records, instruments and certificates of public officials as we have deemed necessary or appropriate to enable us to render this opinion. In addition, we have assumed: (i) that all signatures are genuine, (ii) that all documents submitted to us as originals are genuine, and (iii) that all copies submitted to us conform to the originals.

Based upon and subject to the foregoing, we are of the opinion that, when the applicable provisions of the Act and such "Blue Sky" or other state securities laws as may be applicable shall have been complied with:

- (a) the Shares when delivered to the purchaser or purchasers thereof against receipt by the Company of such lawful consideration therefor as the Company's Board of Directors (or a duly authorized committee thereof or a duly authorized officer of the Company) may determine, and at a price per share not less than the per share par value of the Common Stock, will be legally issued, fully paid and non-assessable;
- (b) the Warrant Shares, when duly issued upon exercise of the Warrants in accordance with the terms and provisions thereof, will be legally issued, fully paid and non-assessable; and
- (c) the Warrants when (a) duly executed, authenticated, issued and sold in accordance with the Registration Statement and (b) delivered to the purchaser or purchasers thereof against receipt by the Company of such lawful consideration therefor as the Company's Board of Directors (or a duly authorized committee thereof or a duly authorized officer of the Company) may determine will be legal, valid and binding obligations of the Company;

subject to (a) limitations imposed by bankruptcy, reorganization, moratorium, insolvency, fraudulent conveyance, fraudulent transfer, preferential transfer and other laws of general application relating to or affecting the enforceability of creditors' rights and to general principles of equity, including, without limitation, reasonableness, good faith and fair dealing, and considerations of impracticability or impossibility or performance and defenses based upon unconscionability (regardless of whether such

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enforceability is considered or applied in a proceeding in equity or at law) and (b) the qualifications that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

We are members of the bar of the State of New York and the opinion set forth below is restricted to matters controlled by federal laws, the laws of the State of New York and the General Corporation Law and Constitution of the State of Delaware.

We hereby consent to the use of our name under the caption "Legal Matters" in the prospectus constituting a part of the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder, or Item 509 of Regulation S-K promulgated under the Act.

This opinion letter is rendered as of the date first written above, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein.

Very truly yours,

/s/ Hughes Hubbard & Reed LLP

CONSENT OF REGISTERED INDEPENDENT PUBLIC ACCOUNTING FIRM

We consent to the use of our report dated February 27, 2009, relating to the balance sheets of Delcath Systems, Inc. (the "Company") as of December 31, 2008 and 2007, and the related statements of operations, other comprehensive loss, stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2008, and cumulative from inception (August 5, 1988) to December 31, 2008 (which report expressed an unqualified opinion), relating to the financial statement schedule and relating to the Company's internal control over financial reporting as of December 31, 2008, included in the Company's Annual report on Form 10-K for the fiscal year ended December 31, 2008 and incorporated by reference herein and to the reference to our firm under the heading "Experts" in the prospectus.

/s/ CCR LLP  
Glastonbury, CT  
June 8, 2009