

Registration No. 333-\_\_\_\_\_

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

-----  
FORM S-8  
REGISTRATION STATEMENT  
THE SECURITIES ACT OF 1933  
-----

DEL CATH SYSTEMS, INC.

-----  
(Exact name of registrant as specified in its charter)

Delaware

06-1245881

-----  
(State or other jurisdiction of  
incorporation or organization)

-----  
(I.R.S. Employer  
Identification No.)

1100 Summer Street  
Stamford, Connecticut

06905

-----  
(Address of Principal Executive  
Offices)

-----  
(Zip Code)

2000 Stock Option Plan  
2001 Stock Option Plan  
2004 Stock Incentive Plan

-----  
(Full title of the plans)

M. S. Koly  
President and Chief Executive Officer  
Delcath Systems, Inc.  
1100 Summer Street  
3rd Floor  
Stamford, Connecticut 06905

-----  
(Name and address of agent for service)

(203) 323-8668  
(Telephone number, including area code of agent for service)

Copy to:  
Paul G. Hughes  
Murtha Cullina LLP  
Two Whitney Avenue, P.O. Box 704  
New Haven, Connecticut 06503-0704

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)(2)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price (3)	Amount of Registration Fee
Common Stock, \$0.01 par value	4,077,300 shares	(3)	\$7,092,289	\$899

(1) Includes an indeterminate number of shares of Common Stock, par value \$0.01 of Delcath Systems, Inc. that may be issuable by reason of stock splits,

stock dividends or similar transactions. In addition, pursuant to Rule 416(c) under the Securities Act of 1933, this Registration Statement also covers an indeterminate number of interests to be offered or sold pursuant to the employee benefit plans described herein.

- (2) Includes an aggregate of 1,077,300 shares that may be sold under the 2000 Stock Option Plan, and the 2001 Stock Option Plan; and 3,000,000 shares which may be offered or sold under the 2004 Stock Incentive Plan.
- (3) For shares that may be sold under the 2000 Stock Option Plan and the 2001 Stock Option Plan, the offering price is based on the exercise price of the outstanding options of \$1,302,289. For shares which may be offered or sold under the 2004 Stock Incentive Plan, estimated in accordance with Rule 457(h)(1) under the Securities Act of 1933, as amended, solely for the purpose of calculating the registration fee; the price used is the closing price of the Common Stock of \$1.93 on October 20, 2004, as reported by the Nasdaq SmallCap Market.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

In accordance with the Note to Part I of the Registration Statement on Form S-8, the document(s) containing the information specified in Part I of the Registration Statement on Form S-8 is not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act of 1933.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Company with the SEC pursuant to the Securities Exchange Act of 1934 (the "Exchange Act") are incorporated by reference:

(a) the Company's Annual Report on Form 10-KSB for the year ended December 31, 2003, filed on March 30, 2004;

(b) the Company's definitive Proxy Statement dated April 29, 2004 distributed in connection with the Company's Annual Meeting of Shareholders held on June 15, 2004;

(c) the Company's Quarterly Report on Form 10-QSB for the quarter ended March 31, 2004, filed on May 17, 2004;

(d) the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 2004, filed on August 12, 2004;

(e) the Company's Current Report on Form 8-K dated September 30, 2004; and

(f) the description of the Company's common stock contained under the caption "Description of Our Capital Stock and Other Securities - Units" in the Prospectus included in the Company's Registration Statement on Form SB-2 (No. 333-101661), declared effective on May 15, 2003.

All documents that the Company files with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date hereof and prior to the filing of a post-effective amendment to this registration statement that indicates that all the common stock offered has been sold, or which deregisters all common stock then remaining unsold hereunder, shall be incorporated by reference into this registration statement and to be a part hereof (and of the prospectus(es)) from the date of filing of such documents. Any statement contained in the prospectus(es) will be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained in any subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 8. Exhibits.

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended to June 16, 2004 (incorporated by reference to Exhibit 3(i) to the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 2004)
3.2	Amended and Restated By-laws of the Company (incorporated by reference to Exhibit 3.2 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))

- 4.1 Warrant Agreement, dated as of January 5, 2001, by and between Delcath Systems, Inc. and Euroland Marketing Solutions, Ltd. (incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000 (Commission File No. 001-16133))
- 4.2 Warrant No. W-2 to purchase up to 150,000 units granted to Euroland Marketing Services, Ltd. (incorporated by reference to Exhibit 4.6 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000 (Commission File No. 001-16133))
- 4.3 Rights Agreement, dated October 30, 2001, by and between Delcath Systems, Inc. and American Stock Transfer & Trust Company, as Rights Agent (incorporated by reference to Exhibit 4.7 to the Company's Form 8-A dated November 12, 2001 (Commission File No. 001-16133))
- 4.4 Form of Warrant Agreement by and between Delcath Systems, Inc. and Whale Securities Co., L.P. (incorporated by reference to Exhibit 4.2 to Amendment No. 5 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))
- 4.5 Form of Warrant Agent Agreement by and among Delcath Systems, Inc., Whale Securities Co., L.P., and American Stock Transfer & Trust Company, as warrant agent (incorporated by reference to Exhibit 4.3 to Amendment No. 5 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))
- 4.6 Form of Underwriter's Unit Warrant Agreement between Delcath Systems, Inc. and Roan/Meyers Associates L.P. (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661)).
- 4.7 Specimen 2003 Warrant (incorporated by reference to Exhibit 4.2 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661))
- 4.8 Form of Warrant Agent Agreement by and between Delcath Systems, Inc. and American Stock Transfer & Trust Company, as warrant agent, with respect to the 2003 Warrants (incorporated by reference to Exhibit 4.8 to Amendment No. 3 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661))
- 5.1 Opinion of Murtha Cullina LLP
- 23.1 Consent of Eisner LLP
- 23.2 Consent of Murtha Cullina LLP (included in Exhibit 5.1)
- 24 Power of attorney of certain officers and directors of the Company
- 99.1 2000 Stock Option Plan (incorporated by reference to Exhibit 10.3 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))

99.2 2001 Stock Option Plan (incorporated by reference to Exhibit 10.12 to Amendment No. 1 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2001 (Commission File No. 001-16133))

99.3 2004 Stock Incentive Plan (incorporated by reference to Exhibit B to the Company's definitive Proxy Statement dated April 29, 2004 (Commission File No. 001-16133))

Item 9. Undertakings.

(a) The Company hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment hereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement;

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that the undertakings set forth in paragraphs (i) and (ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the Company pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered hereby which remain unsold at the termination of the offering.

(b) The Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(h) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director or officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being

registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 the City of Stamford, State of Connecticut on October 21, 2004.

Delcath Systems, Inc.

By: /s/ M. S Koly

-----  
Name: M. S Koly  
Title: 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 date indicated.

Name	Title	
M. S. Koly	President and Chief Executive Officer and Director (Principal Executive Officer)	)
Paul M. Feinstein	Chief Financial Officer (Principal Financial Officer)	)
Samuel Herschkowitz	Chairman and Director	)
Mark A.Corigliano	Director	)
Daniel Isdaner	Director	)
Victor Nevins	Director	)

By: /s/ M. S. Koly  
-----  
Attorney-in-Fact

Dated: October 21, 2004



## EXHIBIT INDEX

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended to June 16, 2004 (incorporated by reference to Exhibit 3(i) to the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 2004)
3.2	Amended and Restated By-laws of the Company (incorporated by reference to Exhibit 3.2 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))
4.1	Warrant Agreement, dated as of January 5, 2001, by and between Delcath Systems, Inc. and Euroland Marketing Solutions, Ltd. (incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000 (Commission File No. 001-16133))
4.2	Warrant No. W-2 to purchase up to 150,000 units granted to Euroland Marketing Services, Ltd. (incorporated by reference to Exhibit 4.6 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2000 (Commission File No. 001-16133))
4.3	Rights Agreement, dated October 30, 2001, by and between Delcath Systems, Inc. and American Stock Transfer & Trust Company, as Rights Agent (incorporated by reference to Exhibit 4.7 to the Company's Form 8-A dated November 12, 2001 (Commission File No. 001-16133))
4.4	Form of Warrant Agreement by and between Delcath Systems, Inc. and Whale Securities Co., L.P. (incorporated by reference to Exhibit 4.2 to Amendment No. 5 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))
4.5	Form of Warrant Agent Agreement by and among Delcath Systems, Inc., Whale Securities Co., L.P., and American Stock Transfer & Trust Company, as warrant agent (incorporated by reference to Exhibit 4.3 to Amendment No. 5 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))
4.6	Form of Underwriter's Unit Warrant Agreement between Delcath Systems, Inc. and Roan/Meyers Associates L.P. (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661)).
4.7	Specimen 2003 Warrant (incorporated by reference to Exhibit 4.2 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661))
4.8	Form of Warrant Agent Agreement by and between Delcath Systems, Inc. and American Stock Transfer & Trust Company, as warrant agent, with respect to the 2003 Warrants (incorporated by reference to Exhibit 4.8 to Amendment No. 3 to the Company's Registration Statement on Form SB-2 (Registration No. 333-101661))
5.1	Opinion of Murtha Cullina LLP

23.1 Consent of Eisner LLP

23.2 Consent of Murtha Cullina LLP (included in Exhibit 5.1)

24 Power of attorney of certain officers and directors of the Company

99.1 2000 Stock Option Plan (incorporated by reference to Exhibit 10.3 to the Company's Registration Statement on Form SB-2 (Registration No. 333-39470))

99.2 2001 Stock Option Plan (incorporated by reference to Exhibit 10.12 to Amendment No. 1 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2001 (Commission File No. 001-16133))

99.3 2004 Stock Incentive Plan (incorporated by reference to Exhibit B to the Company's definitive Proxy Statement dated April 29, 2004 (Commission File No. 001-16133))

[LETTERHEAD OF MURTHA CULLINA LLP]

PAUL G. HUGHES  
(203) 772-7726 DIRECT TELEPHONE  
(860) 240-5726 DIRECT FACSIMILE  
PHUGHES@MURTHALAW.COM

October 21, 2004

The Board of Directors  
Delcath Systems, Inc.  
1100 Summer Street  
Stamford, Connecticut 06905

Re: Registration Statement on Form S-8

Dear Sirs:

We have acted as special counsel to Delcath Systems, Inc., a Delaware corporation (the "Company"), in connection with its Registration Statement on Form S-8 being filed on the date hereof (the "Registration Statement"), for the offering by it of up to 4,251,542 shares (the "Shares") of its Common Stock, par value \$0.01 (the "Common Stock") issuable upon exercise of awards that have been granted pursuant to its 2000 Stock Option Plan or its 2001 Stock Option Plan or that may be granted pursuant to its 2004 Stock Incentive Plan (individually, a "Plan" and, collectively, the "Plans").

We have examined and relied upon originals or copies, certified or otherwise identified to our satisfaction of the following documents: (a) the Amended and Restated Certificate of Incorporation of the Company, as amended, in the form filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 2004 (file No. 001-16133); (b) the Amended and Restated Bylaws of the Company in the form filed as Exhibit 3.2 to Amendment No. 1 to the Company's Registration Statement on Form SB-2 (No. 333-39470); (c) a Certificate dated the date hereof of the Company's President and Chief Executive Officer as to certain matter of fact; (d) the Plans; and (e) such other documents as we have considered necessary to the rendering of the opinions expressed below.

In our examination of the foregoing, we have assumed that: (a) the statements made therein are accurate and complete; (b) the signatures on documents and instruments submitted to us as originals are authentic; and (c) documents submitted to us as certified, conformed or photostatic copies of original documents conform with the originals thereof and the originals thereof are authentic. We have also assumed that each award granted or that may be granted under the Plans was or will be granted in accordance with the respective Plan under which it was or will be granted.

The Board of Directors  
Delcath Systems, Inc.  
October 21, 2004  
Page 2

In rendering the opinion set forth below, we have also assumed that, upon issuance of the Shares upon exercise of awards under the Plans, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue.

Based upon the foregoing and assuming that the purchase price of the Shares issued pursuant to the Plans will be not less than the par value of the Shares, we are of the opinion that the Shares will, upon issuance in accordance with the provisions of the respective Plan subsequent to the exercise of awards granted under such Plan, be legally issued, fully paid and nonassessable.

The foregoing opinion is limited to the General Corporation Law of the

State of Delaware, and we do not express any opinion herein concerning any other law. We assume no obligation to supplement this opinion if any applicable law changes after the date hereof or if we become aware of any fact that might change the opinion expressed herein after the date hereof.

This opinion is being furnished to you for filing as an exhibit to the Registration Statement and, accordingly, may not be relied upon by or quoted in any manner or delivered to any other person or entity without, in each instance, our prior written consent.

We consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm appearing under the caption "Legality" in the Prospectuses forming part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

MURTHA CULLINA LLP

By /s/ PAUL G. HUGHES

-----  
Paul G. Hughes

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-8 of our report dated February 11, 2004 (March 22, 2004 with respect to Note 6) on our audits of the financial statements of Delcath Systems, Inc. (the "Company") as of December 31, 2003 and for each of the years in the two-year period ended December 31, 2003 and for the period from August 5, 1988 (inception) to December 31, 2003.

/s/ EISNER LLP

- - - - -

Eisner LLP

New York, NY  
October 20, 2004

## POWER OF ATTORNEY

We, the undersigned officers and directors of Delcath Systems, Inc., a Delaware corporation (the "Company"), hereby severally constitute and appoint M. S. Koly and Paul M. Feinstein, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, and with full powers of substitution and resubstitution, to sign for us and in our names in the capacities indicated below, the Registration Statement on Form S-8 relating to the offer of shares of the Company's common stock, par value \$0.01, pursuant to the Company's 1992 Incentive Stock Option Plan, its 1992 Non-Incentive Stock Option Plan, its 2000 Stock Option Plan, its 2001 Stock Option Plan and its 2004 Stock Incentive Plan, and any and all pre-effective and post-effective amendments to said Registration Statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable the Company to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our attorneys, or either of them, or their substitute or substitutes, to said Registration Statement and any and all amendments thereto.

Signature -----	Title -----	Date ----
/s/ M. S. KOLY ----- M. S. Koly	President and Chief Executive Officer (Principal Executive Officer) and Director	October 21, 2004
/s/ PAUL M. FEINSTEIN ----- Paul M. Feinstein	Chief Financial Officer (Principal Financial and Accounting Officer)	October 21, 2004
/s/ SAMUEL HERSCHKOWITZ ----- Samuel Herschkowitz, M.D.	Chairman and Director	October 21, 2004
/s/ MARK A. CORIGLIANO ----- Mark A. Corigliano	Director	October 21, 2004
/s/ DANIEL ISDANER ----- Daniel Isdaner	Director	October 21, 2004
/s/ VICTOR NEVINS ----- Victor Nevins	Director	October 21, 2004