Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

VICAL INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 93-0948554 (I.R.S. Employer Identification No.)

92121 (Zip Code)

10390 Pacific Center Court San Diego, California (Address of Principal Executive Offices)

AMENDED AND RESTATED STOCK INCENTIVE PLAN OF VICAL INCORPORATED (Full title of the plan)

Vijay B. Samant President and Chief Executive Officer Vical Incorporated 10390 Pacific Center Court San Diego, California 92121 (858) 646-1100 (Name, address and telephone number, including area code, of agent for service)

Copies to:

Frederick T. Muto, Esq. Jason L. Kent, Esq. Sean M. Clayton, Esq. Cooley LLP 4401 Eastgate Mall San Diego, California 92121 (858) 550-6000

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 filerAccelerated filerXNon-accelerated filer(Do not check if a smaller reporting company)Smaller reporting company

CALCULATION OF REGISTRATION FEE

	Amount To	Proposed Maximum Offering Price Per	Proposed Maximum Aggregate Offering	Amount of
Securities To Be Registered	Be Registered(1)	Share(2)	Price(2)	Registration Fee
Common Stock, \$0.01 par value	3,000,000 shares	\$3.50	\$10,500,000	\$1,204

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also registers any additional shares of Registrant's Common Stock that become issuable under the plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of Registrant's Common Stock.

(2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h)(1) under the Securities Act. The price per share and aggregate offering price are based upon the average of the high and low prices of Registrant's Common Stock on August 6, 2012, as reported by the NASDAQ Global Market.

This Registration Statement shall become effective upon filing in accordance with Rule 462 under the Securities Act.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

This Registration Statement is being filed for the purpose of increasing the number of securities of the same class as other securities for which a registration statement on Form S-8 of the Registrant relating to the same employee benefit plan is effective.

The Registrant's registration statements on Form S-8 filed with the Securities and Exchange Commission (the "SEC") on April 9, 1993 (File No. 33-60826), July 15, 1994 (File No. 33-81602), June 27, 1997 (File No. 333-30181), July 31, 1998 (File No. 333-60293), June 15, 1999 (File No. 333-80681), July 30, 2001 (File No. 333-66254), July 24, 2002 (File No. 333-97019), August 1, 2003 (File No. 333-107581), June 29, 2004 (File No. 333-116951), June 23, 2006 (File No. 333-135266), June 19, 2007 (File No. 333-143885) and September 13, 2010 (File No. 333-169344) are incorporated by reference in this Registration Statement.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by Registrant with the SEC are incorporated by reference in this Registration Statement (other than portions of current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits related to such Items or other portions of documents filed with the SEC which are furnished, but not filed, pursuant to applicable rules promulgated by the SEC):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2011, which was filed on March 15, 2012;
- our Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, which was filed on August 8, 2012;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, which was filed on May 2, 2012;
- our Current Reports on Form 8-K filed on January 5, 2012, January 9, 2012, February 8, 2012 and May 31, 2012; and
- the description of our common stock contained in the registration statement on Form 8-A filed on January 8, 1993.

In addition, all reports and other documents subsequently filed by Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended, other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items, prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such reports and documents.

Item 8. Exhibits.

Exhibit	
Number	Exhibit
4.1(1)	Restated Certificate of Incorporation
4.2(2)	Amended and Restated Bylaws
4.3(3)	Certificate of Amendment to Restated Certificate of Incorporation
4.4(4)	Certificate of Amendment to Restated Certificate of Incorporation
4.5(5)	Specimen Common Stock Certificate
5.1	Opinion of Cooley LLP
23.1	Consent of Independent Registered Public Accounting Firm
23.2	Consent of Cooley LLP (reference is made to Exhibit 5.1)
24.1	Power of Attorney (contained on the signature page of this registration statement)
99.1(6)	Amended and Restated Stock Incentive Plan
(1) Incorporate	ed by reference to Exhibit 3 1(i) filed with the Company's Registration Statement on

(1) Incorporated by reference to Exhibit 3.1(i) filed with the Company's Registration Statement on Form S-3 (No. 33-95812) filed on August 15, 1995.

- (2) Incorporated by reference to Exhibit 3.2(ii) filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.
- (3) Incorporated by reference to Exhibit 3.3(i) filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.
- (4) Incorporated by reference to Exhibit 4.2 filed with the Company's Registration Statement on Form S-8 (No. 333-135398) filed on June 23, 2006.
- (5) Incorporated by reference to Exhibit 4.1 filed with the Company's Registration Statement on Form S-3 (No. 33-95812) filed on August 15, 1995.
- (6) Incorporated by reference to Exhibit 99.1 filed with the Company's Current Report on Form 8-K filed on May 31, 2012.

Item 9. Undertakings.

1. The undersigned Registrant hereby undertakes:

(a) 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 the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(i) and (a)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(b) 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 herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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

(d) That, for the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

- 2. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 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 (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 herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- 3. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission 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 Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant 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 Registrant 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 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, 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 San Diego, State of California, on August 10, 2012.

VICAL INCORPORATED

By : /s/ Vijay B. Samant

Vijay B. Samant President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Vijay B. Samant and Jill M. Broadfoot, and each of them, his or her true and lawful attorneys-in-fact and agents, each 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 file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or her substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the date indicated:

Signature	Title	Date
/s/ Vijay B. Samant Vijay B. Samant	President, Chief Executive Officer and Director (Principal Executive Officer)	August 10, 2012
/s/ Jill M. Broadfoot Jill M. Broadfoot	Senior Vice President, Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	August 10, 2012
/s/ R. Gordon Douglas R. Gordon Douglas	Chairman of the Board of Directors	August 10, 2012
/s/ Robert H. Campbell Robert H. Campbell	Director	August 10, 2012
/s/ Gary A. Lyons Gary A. Lyons	Director	August 10, 2012
/s/ Robert C. Merton Robert C. Merton	Director	August 10, 2012

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4.5(5)	Specimen Common Stock Certificate
5.1	Opinion of Cooley LLP

23.1 Consent of Independent Registered Public Accounting Firm

23.2 Consent of Cooley LLP (reference is made to Exhibit 5.1)

24.1 Power of Attorney (contained on the signature page of this registration statement)

99.1(6) Amended and Restated Stock Incentive Plan

Incorporated by reference to Exhibit 3.1(i) filed with the Company's Registration Statement on Form S-3 (No. 33-95812) filed on August 15, 1995. Incorporated by reference to Exhibit 3.2(ii) filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010. (1)

(2)

(3)Incorporated by reference to Exhibit 3.3(i) filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010.

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Incorporated by reference to Exhibit 99.1 filed with the Company's Current Report on Form 8-K filed on May 31, 2012. (6)



Jason L. Kent (858) 550-6044 jkent@cooley.com

August 10, 2012

Vical Incorporated 10390 Pacific Center Court San Diego, CA 92121

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by Vical Incorporated (the *Company*") of a Registration Statement on Form S-8 (the *"Registration Statement*"), with the Securities and Exchange Commission, covering the registration of 3,000,000 shares of the Company's Common Stock (the *Shares*") for issuance pursuant to the Company's Amended and Restated Stock Incentive Plan (the *"Plan*").

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectus, the Plan, the Company's Restated Certificate of Incorporation, as amended, its Amended and Restated Bylaws, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that, when sold and issued in accordance with the Registration Statement and related prospectus and the Plan, the Shares will be validly issued, fully paid and nonassessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Jason L. Kent

Jason L. Kent

4401 EASTGATE MALL, SAN DIEGO, CA 92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Amended and Restated Stock Incentive Plan of Vical Incorporated of our reports dated March 15, 2012, with respect to the financial statements of Vical Incorporated and the effectiveness of internal control over financial reporting of Vical Incorporated included in its Annual Report (Form 10-K) for the year ended December 31, 2011, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

San Diego, California August 10, 2012