

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

FORM S-8

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

OPKO HEALTH, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

75-2402409

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

4400 Biscayne Blvd, Suite 1500

Miami, Florida 33137

(Address of Principal Executive Offices)

Opko Health, Inc. 2007 Equity Incentive Plan

Cytoclonal Pharmaceuticals Inc. 2000 Stock Option Plan

Acuity Pharmaceuticals, Inc. 2003 Equity Incentive Plan and Options to Purchase Common Stock

Granted by Froptix Corporation

(Full Title of the Plans)

Steven D. Rubin

Executive Vice President — Administration

4400 Biscayne Blvd, Suite 1500

Miami, Florida 33137

(Name and Address of Agent for Service)

(305) 575-6000

(Telephone Number, Including Area Code, of Agent for Service)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Amount To Be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.01 par value per share	50,075,099(2)	\$3.86(3)	\$193,289,882.14	\$5,934.00

- (1) This Registration Statement shall also cover any additional shares of Registrant's common stock in respect of the securities identified in the above table by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration which results in an increase in the number of the outstanding shares of Registrant's common stock.
- (2) Consist of 35,000,000 shares subject to issuance upon the exercise of stock options outstanding under the Opko Health, Inc. 2007 Equity Incentive Plan, 10,638,221 shares subject to issuance upon the exercise of stock options outstanding under the Acuity Pharmaceuticals, Inc. 2003 Equity Incentive Plan and 4,436,878 shares subject to issuance upon the exercise of stock options outstanding under an agreement entered into by Froptix Corporation.
- (3) Calculated pursuant to Rule 457(c) and Rule 457(h) under the Securities Act of 1933, as amended (the "Securities Act"), based upon the average of the high and low sales prices per share of the Registrant's common stock reported on the American Stock Exchange on June 21, 2007, and the maximum number of shares of common stock currently issuable pursuant to the Opko Health, Inc. 2007 Equity Incentive Plan, the Acuity Pharmaceuticals, Inc. 2003 Equity Incentive Plan and an agreement entered into by Froptix Corporation with one of its founders (the "Plans").

Pursuant to Rule 429 under the Securities Act of 1933, as amended, the document containing the information required by Part I of this Registration Statement on Form S-8 also relates to 1,500,000 shares subject to issuance upon the exercise of stock options outstanding under the Cytoclonal Pharmaceuticals Inc. 2000 Stock Option Plan, which shares were previously registered on Registration Statement on Form S-8 (Registration No. 333-59490), under the Registrant's former name Cytoclonal Pharmaceuticals Inc. This registration statement shall act as a post-effective amendment to that registration statement. The registrant has previously paid a fee relating to that registration.

INTRODUCTORY STATEMENT

On March 27, 2007, Opko Health, Inc., (“Opko” or the “Registrant”) and two of its wholly-owned subsidiaries, Acuity Pharmaceuticals, Inc. (“Acuity”) and Froptix Corporation (“Froptix”), entered into a Merger Agreement and Plan of Reorganization (the “Merger Agreement”). Pursuant to the terms of the Merger Agreement, Acuity and Froptix merged with and into the two wholly-owned subsidiaries of the Registrant on March 27, 2007, with Acuity and Froptix becoming wholly-owned subsidiaries of the Registrant.

The Merger Agreement provided that at the effective time of the merger, the terms of each outstanding unvested option to acquire shares of Acuity and Froptix common stock granted under outstanding Acuity option plans and Froptix option plans would be converted into an option to acquire, on the same terms and conditions, a number of shares of Opko common stock in an amount and at an exercise price based on the formulae set forth in the Merger Agreement.

PART I

INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS

This information will be sent or given to all persons who participate in the Plans as specified by Rule 428(b)(1) of the Securities Act. This information and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents filed by the Registrant with the Commission pursuant to the Securities and Exchange Act of 1934, as amended (the “Exchange Act”):

- (a) The Registrant’s Annual Report on Form 10-K for the year ended December 31, 2006.
- (b) The Registrant’s Annual Report on Form 10-K/A for the year ended December 31, 2006.
- (c) The Registrant’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2007.
- (d) The Company’s Proxy Statement on Schedule 14C filed with the Commission on May 16, 2007.
- (e) The Registrant’s Current Reports on Form 8-K filed on February 9, 2007, March 27, 2007, April 2, 2007, April 13, 2007, April 18, 2007 and May 11, 2007.

- (f) The description of the Registrant's Common Shares in the Registrant's Registration Statement on Form 8-A filed on June 8, 2007, including any amendment or report filed for the purpose of updating such description.

All other documents filed subsequent to the filing date of this Registration Statement with the Commission by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered hereby have been sold, or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing such documents.

Any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this Registration Statement or any prospectus hereunder to the extent that a statement contained herein or in any subsequently filed document which also is, or is deemed to be, incorporated by reference herein modifies or supersedes such prior statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement or any prospectus hereunder except as indicated herein.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Article Ninth of the Registrant's Restated Certificate of Incorporation provides that to the fullest extent permitted by Delaware Law, no director of the Registrant shall be liable to the Registrant or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit.

Section 7.1 of the Registrant's By-Laws, provides that the Registrant shall indemnify and hold harmless to the fullest extent permitted by Delaware law, each former, present or future director, officer, employee or agent of the Registrant, and each person who may serve at the request of the Registrant as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against all expenses, liability and loss (including attorneys' fees) reasonably incurred by such person if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The Registrant shall pay the expenses (including attorneys' fees) incurred by an officer or director of the Registrant in defending any proceeding in advance of its final disposition, upon receipt of an undertaking by the director or officer to

repay all amounts advanced if it is ultimately determined that such director or officer is not entitled to be indemnified. The Registrant may advance payment of expenses incurred by former directors and officers or other employees and agents of the Registrant on such terms and conditions, as the Registrant deems appropriate.

Section 145 of the General Corporation Law of the State of Delaware sets forth the applicable terms, conditions and limitations governing the indemnification of officers, directors and other persons.

In addition, the Registrant maintains officers' and directors' liability insurance for the benefit of its officers and directors.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Opko Health Inc., as currently in effect (incorporated by reference to Exhibit 2.1 to Form 8-A filed June 8, 2007)
3.2	Amended and Restated Bylaws of Opko Health Inc., as currently in effect (incorporated by reference to Exhibit 2.2 to Form 8-A filed June 8, 2007)
5.1	Opinion of Akerman Senterfitt
23.1	Consent of Rotenberg & Co., LLC
23.2	Consent of BDO Seidman, LLP
23.3	Consent of KPMG LLP
23.4	Consent of Ernst & Young LLP
23.5	Consent of Akerman Senterfitt (contained in Exhibit 5.1)
24.1	Power of Attorney (contained in the signature page hereto)

Item 9. Undertakings.

(a) The undersigned Registrant 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 of 1933;

(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 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

(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)(1)(i) and (a)(1)(ii) of this section do not apply if the Registration Statement is on Form S-8, and 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 Securities Exchange Act that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, 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 which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) 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 of 1933 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 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 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 Miami, State of Florida, on June 25, 2007.

OPKO HEALTH, INC.

By: /s/ Adam Logal

Adam Logal

Executive Director of Finance, Chief Accounting
Officer and Treasurer

POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act, this Registration Statement and Power of Attorney have been signed by the following persons in the capacity and on the dates indicated.

KNOW ALL MEN BY THESE PRESENTS, that each person whose name appears below hereby constitutes and appoints Adam Logal and Steven D. Rubin his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his 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 attorney-in-fact and agent 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 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.

Signatures	Title	Date
<u>/s/ Phillip Frost</u> Phillip Frost, M.D.	Chairman of the Board Chief Executive Officer (Principal Executive Officer)	June 25, 2007
<u>/s/ Rao Uppaluri</u> Rao Uppaluri	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	June 25, 2007
<u>/s/ Steven D. Rubin</u> Steven D. Rubin	Director	June 25, 2007
<u>/s/ Jane H. Hsiao</u> Jane H. Hsiao, Ph.D., MBA	Director	June 25, 2007
<u>/s/ John A. Paganelli</u> John A. Paganelli	Director	June 25, 2007
<u>/s/ David A. Eichler</u> David A. Eichler	Director	June 25, 2007
<u>/s/ Michael Reich</u> Michael Reich	Director	June 25, 2007
<u>/s/ Robert Baron</u> Robert Baron	Director	June 25, 2007
<u>/s/ Richard A. Lerner</u> Richard A. Lerner, M.D.	Director	June 25, 2007
<u>/s/ Melvin L. Rubin</u> Melvin L. Rubin, M.D.	Director	June 25, 2007

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24.1	Power of Attorney (contained in the signature page hereto)

June 25, 2007

Opko Health, Inc.
4400 Biscayne Blvd, Suite 1500
Miami, Florida 33137

Ladies and Gentlemen:

We have acted as counsel to Opko Health, Inc. (the "Company"), in connection with the preparation and filing by the Company with the Securities and Exchange Commission of a Registration Statement on Form S-8 (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Securities Act"). Such Registration Statement relates to the registration by the Company of (i) 35,000,000 shares of Common Stock, par value per share, of the Company (the "Common Stock") that may be issued pursuant to the Opko Health, Inc. 2007 Equity Incentive Plan, (ii) 10,638,221 shares of Common Stock that may be issued under the Acuity Pharmaceuticals, Inc. 2003 Equity Incentive Plan and (iii) 4,436,878 shares of Common Stock that may be issued under an agreement entered into by Fropitix Corporation with one of its founders.

In connection with the Registration Statement, we have examined, considered and relied upon copies of such documents and instruments that we have deemed necessary for the expression of the opinions contained herein. In our examination of these documents, we have assumed, without independent investigation, the genuineness of all signatures, the legal capacity of all individuals who have executed any of the documents, the authenticity of all documents submitted to us as originals and the conformity to the original documents of all copies. Based upon the foregoing examination, we are of the opinion that the shares of Common Stock have been duly authorized and, when issued in accordance with the terms of the plan or agreement under which such shares of Common Stock may be issued, will be validly issued, fully paid and non-assessable shares of Common Stock of the Company.

The opinion expressed herein is limited to the federal securities laws of the United States of America and the corporate laws of the State of Delaware and we express no opinion as to the effect on the matters covered of the laws of any other jurisdiction. We hereby consent to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Akerman Senterfitt

Consent of Independent Registered Public Accounting Firm

Opko Health, Inc.
4400 Biscayne Blvd., Suite 1500
Miami, Florida 33137

We consent to the incorporation by reference in the Form S-8 of Opko Health, Inc. (formerly eXegenics, Inc.) as of our report dated February 19, 2007, with respect to the balance sheets of Opko Health, Inc. (formerly eXegenics, Inc.) as of December 31, 2006 and 2005, and the related statements of operations, changes in stockholders' equity and cash flows for each of the years in the two year period ended December 31, 2006.

/s/ ROTENBERG & CO., LLP

Rochester, New York
June 25, 2007

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in this Form S-8, filed by eXegenics Inc. on June 25, 2007 and the Registration Statement (Form S-8 No. 333-59490) pertaining to the 2000 Stock Option Plan of eXegenics Inc., formerly Cytoclonal Pharmaceuticals, Inc., and the Registration Statement (Form S-8 No. 333-86201) pertaining to the 1996 Stock Option Plan of eXegenics Inc., and related prospectuses of our report dated February 18, 2005, except for Notes K and N which are as of April 12, 2005, with respect to the 2004 financial statements of eXegenics Inc. included in the Annual Report (Form 10-K) for the year ended December 31, 2006.

/s/ BDO Seidman, LLP
BDO Seidman, LLP
Dallas, Texas

June 25, 2007

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Opko Health, Inc.:

We consent to the incorporation by reference in the registration statement on Form S-8 of Opko Health, Inc. of our report dated March 30, 2007, with respect to the balance sheets of Acuity Pharmaceuticals, Inc. (a development-stage company) as of December 31, 2006 and 2005, and the related statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the years in the three year period ended December 31, 2006 and period from March 27, 2003 (inception) to December 31, 2006, which report appears in the Form 8-K of eXegenics Inc. dated April 2, 2007.

Our report dated March 27, 2007, contains an explanatory paragraph that states the Company has suffered recurring losses from operations and has a total stockholders' deficit that raises substantial doubt about its ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Our report also refers to that effective January 1, 2006, the Company adopted the fair value method of accounting for stock-based compensation as required by Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment*.

/s/ KPMG LLP

Philadelphia, Pennsylvania

June 25, 2007

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference of our report dated March 23, 2007 with respect to the financial statements of Froptix Corporation included in eXegenics, Inc.'s Current Report on Form 8-K dated March 27, 2007 for the period from June 23, 2006 (inception) to December 31, 2006 in the Registration Statement (Form S-8 No. 333-) of Opko Health, Inc. for the registration of 50,075,099 shares of its common stock.

/s/ Ernst & Young LLP
Certified Public Accountants

Miami, Florida
June 22, 2007