ENDOLOGIX INC /DE/ Form SC 13G/A February 17, 2015

x Rule 13d-1(c)

"Rule 13d-1(d)

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

SCHEDULE 13G (Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13d-1(b)(c), AND (d) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(b)

(Amendment No. 1) *			
Endologix, Inc.			
(Name of Issuer)			
Common Stock			
(Title of Class of Securities)			
29266S106			
(CUSIP Number)			
December 31, 2014			
(Date of Event Which Requires Filing of this Statement)			
Check the appropriate box to designate the rule pursuant to which this Schedule is filed:			
" Rule 13d-1(b)			

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

(Page 1 of 10 Pages)

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section of the Act but

shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 29266S106 13G Pages

NAME OF REPORTING PERSONS
 I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

Deerfield Mgmt, L.P.

- 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A (a) o GROUP* (b) \circ
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5. SOLE VOTING POWER

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH 0

6. SHARED VOTING POWER

3,378,787 (1)

REPORTING PERSON WITH 7. SOLE DISPOSITIVE POWER

8. SHARED DISPOSITIVE POWER

3,378,787 (1)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,378,787 (1)

- 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) $_{
 m O}$ EXCLUDES CERTAIN SHARES*
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

5.04%

12. TYPE OF REPORTING PERSON*

PN

(1) Comprised of shares of common stock held by Deerfield Partners, L.P. and Deerfield International Master Fund, L.P., of which Deerfield Mgmt, L.P. is the general partner.

CUSIP No. 29266S106 13G

Page 3 of 10 Pages

NAME OF REPORTING PERSONS
 I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

Deerfield Management Company, L.P.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A (a) o GROUP* (b) \circ

- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5. SOLE VOTING POWER

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH 0

6. SHARED VOTING POWER

3,378,787 (2)

REPORTING PERSON WITH 7. SOLE DISPOSITIVE POWER

8. SHARED DISPOSITIVE POWER

3,378,787 (2)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,378,787 (2)

- 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) $_{
 m O}$ EXCLUDES CERTAIN SHARES*
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

5.04%

12. TYPE OF REPORTING PERSON*

PN

(2) Comprised of shares of common stock held by Deerfield Partners, L.P. and Deerfield International Master Fund, L.P., of which Deerfield Management Company, L.P. is the investment advisor.

CUSIP No. 29266	Page 4 of 10 Pages			
1.	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)			
2.	Deerfield Partr CHECK THE API GROUP*			
3.	SEC USE ONLY			
4.	CITIZENSHIP OR PLACE OF ORGANIZATION			
	Delaware			
	5.	SOLE VOTING POWER		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH		0		
	6.	SHARED VOTING POWER		
		1,505,329		
	7.	SOLE DISPOSITIVE POWER		
		0		
	8.	SHARED DISPOSITIVE POWER		
		1,505,329		
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		TING	
	1,505,329			
10.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) O EXCLUDES CERTAIN SHARES*			
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9			
	2.25%			

12.

PN

TYPE OF REPORTING PERSON*

CUSIP No. 29266S106 13G Page 5 of 10 Pages NAME OF REPORTING PERSONS 1. I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Deerfield International Master Fund, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A 2. (a) o GROUP* (b) ý 3. SEC USE ONLY CITIZENSHIP OR PLACE OF ORGANIZATION 4. British Virgin Islands 5. **SOLE VOTING POWER** NUMBER OF 0 **SHARES** SHARED VOTING POWER 6. **BENEFICIALLY** OWNED BY 1,873,458 **EACH** 7. SOLE DISPOSITIVE POWER **REPORTING** PERSON WITH 8. SHARED DISPOSITIVE POWER 1,873,458 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING **PERSON** 1,873,458

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9)

2.80%

10.

12. TYPE OF REPORTING PERSON*

EXCLUDES CERTAIN SHARES*

PN

CUSIP No. 29266S106 13G

NAME OF REPORTING PERSONS
 I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

James E. Flynn

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) o (b) \circ

- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

United States

6.

5. SOLE VOTING POWER

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH 0

SHARED VOTING POWER

3,378,787 (3)

REPORTING PERSON WITH 7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

3,378,787 (3)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,378,787 (3)

- 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) $_{
 m O}$ EXCLUDES CERTAIN SHARES*
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

5.04%

12. TYPE OF REPORTING PERSON*

IN

(3) Comprised of shares of common stock held by Deerfield Partners, L.P. and Deerfield International Master Fund, L.P.

Page 6 of 10 Pages

CUSIP No. 29266S106 13G Page 7 of 10 Pages Item Name of Issuer: 1(a). Endologix, Inc. Item Address of Issuer's Principal Executive Offices: 1(b). 2 Musick Irvine, CA 92618 Item Name of Person Filing: 2(a). James E. Flynn, Deerfield Mgmt, L.P., Deerfield Management Company, L.P., Deerfield Partners, L.P., Deerfield International Master Fund, L.P. Item Address of Principal Business Office, or if None, Residence: 2(b). James E. Flynn, Deerfield Mgmt, L.P., Deerfield Management Company, L.P., Deerfield Partners, L.P., Deerfield International Master Fund, L.P., 780 Third Avenue, 37th Floor, New York, NY 10017 Item Citizenship: 2(c). Deerfield Mgmt, L.P., Deerfield Management Company, L.P. and Deerfield Partners, L.P. -Delaware limited partnerships Deerfield International Master Fund, L.P. - British Virgin Islands limited partnership James E. Flynn – United States citizen Item Title of Class of Securities: 2(d). Common Stock Item **CUSIP Number:** 2(e). 29266S106 If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the

Item 3.

Person Filing is a:

- (a) o Broker or dealer registered under Section 15 of the Exchange Act.
- (b) o Bank as defined in Section 3(a)(6) of the Exchange Act.
- (c) o Insurance company as defined in Section 3(a)(19) of the Exchange Act.
- (d) o Investment company registered under Section 8 of the Investment Company Act.
- (e) o An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f) o An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g) o A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);

CUSIP No. 29266S106 13G

Page 8 of 10 Pages

- (h) o A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act;
- (i) o A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act;
- (j) o A non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J);
- (k) o Group, in accordance with Rule 13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J), please specify the type of institution:

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned**:

Deerfield Mgmt, L.P. – 3,378,787 shares Deerfield Management Company, L.P. – 3,378,787 shares Deerfield Partners, L.P. – 1,505,329 shares Deerfield International Master Fund, L.P. – 1,873,458 shares James E. Flynn – 3,378,787 shares

(b) Percent of class**:

Deerfield Mgmt, L.P. – 5.04% Deerfield Management Company, L.P. – 5.04% Deerfield Partners, L.P. – 2.25% Deerfield International Master Fund, L.P. – 2.80% James E. Flynn – 5.04%

- (c) Number of shares as to which such person has**:
 - (i) Sole power to vote or to direct the vote: All Reporting Persons 0
 - (ii) Shared power to vote or to direct the vote Deerfield Mgmt, L.P. 3,378,787

Deerfield Management Company, L.P.

-3,378,787

Deerfield Partners, L.P. – 1,505,329 Deerfield International Master Fund,

L.P. - 1,873,458

James E. Flynn - 3,378,787

CUSIP No. 29266S106 13G Page 9 of 10 Pages

(iii) Sole power to dispose or to direct the disposition of

All Reporting Persons - 0

(iv) Shared power to dispose or to direct the disposition of

Deerfield Mgmt, L.P. – 3,378,787 Deerfield Management Company, L.P.

-3,378,787

Deerfield Partners, L.P. – 1,505,329 Deerfield International Master Fund, L.P.

- 1,873,458

James E. Flynn - 3,378,787

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities check the following o.

Item 6. Ownership of More Than Five Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than five percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

N/A

Item Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the7. Parent Holding Company or Control Person.

If a parent holding company or Control person has filed this schedule, pursuant to Rule 13d-1(b)(1)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company or control person has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

N/A

Item 8. Identification and Classification of Members of the Group.

If a group has filed this schedule pursuant to ss.240.13d-1(b)(1)(ii)(J), so indicate under Item 3(j) and attach an exhibit stating the identity and Item 3 classification of each member of the group. If a group has filed this schedule pursuant to ss.240.13d-1(c) or ss.240.13d-1(d), attach an exhibit stating the identity of each member of the group.

^{**}See footnotes on cover pages which are incorporated by reference herein.

See Exhibit B

Item 9. Notice of Dissolution of Group.

Notice of dissolution of a group may be furnished as an exhibit stating the date of the dissolution and that all further filings with respect to transactions in the security reported on will be filed, if required, by members of the group, in their individual capacity. See Item 5.

N/A

Item 10. Certifications.

"By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under §240.14a–11."

CUSIP No. 29266S106 13G

Page 10 of 10 Pages

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

DEERFIELD MGMT, L.P.

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-In-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.

By: Flynn Management LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-In-Fact

DEERFIELD PARTNERS, L.P.

By: Deerfield Mgmt, L.P., General Partner

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-In-Fact

DEERFIELD INTERNATIONAL MASTER FUND, L.P.

By: Deerfield Mgmt, L.P., General Partner

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-In-Fact

JAMES E. FLYNN

/s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

Date: February 17, 2015

Exhibit List

Exhibit A. Joint Filing Agreement.

Exhibit B. Item 8 Statement.

Exhibit C. Power of Attorney (1).

(1) Power of Attorney previously filed as Exhibit 24 to a Form 3 with regard to Avalanche Biotechnologies, Inc. filed with the Securities and Exchange Commission on July 30, 2014 by Deerfield Mgmt, L.P., Deerfield Mgmt III, L.P., Deerfield Special Situations Fund, L.P., Deerfield Special Situations International Master Fund, L.P., Deerfield Private Design Fund III, L.P. and James E. Flynn.

Exhibit A

Agreement

The undersigned agree that this Schedule 13G, and all amendments thereto, relating to the Common Stock of Endologix, Inc. shall be filed on behalf of the undersigned.

DEERFIELD MGMT, L.P.

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.

By: Flynn Management LLC, General Partner

By: /s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

DEERFIELD PARTNERS, L.P.

By: Deerfield Mgmt, L.P., General Partner

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

DEERFIELD INTERNATIONAL MASTER FUND, L.P.

By: Deerfield Mgmt, L.P., General Partner

By: J.E. Flynn Capital, LLC, General Partner

By: /s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

JAMES E. FLYNN

/s/ Jonathan Isler Jonathan Isler, Attorney-In-Fact

Exhibit B

Due to the relationships between them, the reporting persons hereunder may be deemed to constitute a "group" with one another for purposes of Section 13(d)(3) of the Securities Exchange Act of 1934.