

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

[Rule 13d-101]

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO § 24.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO § 240.13D-2(a)

(Amendment No. 4)*

Proteon Therapeutics, Inc.

(Name of Issuer)

Common Stock
(Title of Class of Securities)

74371L109
(CUSIP Number)

David Clark
Elliot Press
Deerfield Mgmt, L.P.
780 Third Avenue, 37th Floor
New York, New York 10017
(212) 551-1600

With a copy to:

Mark D. Wood, Esq.
Jonathan D. Weiner, Esq.
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575 Madison Avenue
New York, New York 10022
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(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

November 7, 2019

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

(Continued on following pages)
(Page 1 of 14 Pages)

* 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 disclosures provided in a prior cover page.

The information required on 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 ("Act") 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).

1	NAME OF REPORTING PERSONS Deerfield Special Situations Fund, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 149,676
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 149,676
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 149,676	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 0.73%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSONS Deerfield Partners, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 197,424
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 197,424
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 197,424	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 0.97%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSONS Deerfield Private Design Fund III, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 877,799
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 877,799
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 877,799	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 4.31%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSONS Deerfield Private Design Fund IV, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 16,082,018 (1)(2)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 16,082,018 (1)(2)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 16,082,018 (1)(2)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.985% (2)	
14	TYPE OF REPORTING PERSON PN	

(1) Comprised of 804,101 shares of common stock and 15,277,917 shares of common stock issuable upon conversion of shares of the Issuer's Series A Convertible Preferred Stock ("Series A Convertible Preferred Stock").

(2) The provisions of the Series A Convertible Preferred Stock beneficially owned by the reporting person restrict the conversion of such securities to the extent that, upon such conversion, the number of shares of the Issuer's common stock then beneficially owned by the holder and its affiliates and any other person or entities with which such holder would constitute a Section 13(d) "group" would exceed 9.985% of the total number of shares of the Issuer's common stock then outstanding (the "Ownership Cap"). Accordingly, notwithstanding the number of shares reported, the reporting person disclaims beneficial ownership of the shares of common stock issuable upon conversion of such preferred stock to the extent that upon such conversion the number of shares beneficially owned by all reporting persons hereunder, in the aggregate, would exceed the Ownership Cap.

1	NAME OF REPORTING PERSONS Deerfield Mgmt, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 347,100 (3)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 347,100 (3)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 347,100 (3)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 1.70%	
14	TYPE OF REPORTING PERSON PN	

(3) Comprised of shares of common stock held by Deerfield Special Situations Fund, L.P. and Deerfield Partners, L.P., of which Deerfield Mgmt, L.P. is the general partner.

1	NAME OF REPORTING PERSONS Deerfield Mgmt III, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 877,799 (4)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 877,799 (4)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 877,799 (4)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 4.31%	
14	TYPE OF REPORTING PERSON PN	

(4) Comprised of shares of common stock held by Deerfield Private Design Fund III, L.P., of which Deerfield Mgmt III, L.P. is the general partner.

1	NAME OF REPORTING PERSONS Deerfield Mgmt IV, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 16,082,018 (5)(6)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 16,082,018 (5)(6)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 16,082,018 (5)(6)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.985% (6)	
14	TYPE OF REPORTING PERSON PN	

(5) Comprised of 804,101 shares of common stock held by, and 15,277,917 shares of common stock issuable upon conversion of shares of the Issuer's Series A Convertible Preferred Stock held by, Deerfield Private Design Fund IV, L.P., of which Deerfield Mgmt IV, L.P. is the general partner.

(6) See footnote 2.

1	NAME OF REPORTING PERSONS Deerfield Management Company, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 17,306,917 (7)(8)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 17,306,917 (7)(8)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 17,306,917 (7)(8)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.985% (8)	
14	TYPE OF REPORTING PERSON PN	

(7) Comprised of (i) an aggregate of 2,029,000 shares of common stock held by Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Partners, L.P., and (ii) 15,277,917 shares of common stock issuable upon conversion of shares of the Issuer's Series A Convertible Preferred Stock held by Deerfield Private Design Fund IV, L.P. Deerfield Management Company, L.P. is the investment manager of each of Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P., Deerfield Partners, L.P. and Deerfield Private Design Fund IV, L.P.

(8) See footnote 2.

1	NAME OF REPORTING PERSONS James E. Flynn	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 17,306,917 (9)(10)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 17,306,917 (9)(10)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 17,306,917 (9)(10)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.985 % (10)	
14	TYPE OF REPORTING PERSON IN	

(9) Comprised of (i) an aggregate of 2,029,000 shares of common stock held by Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Partners, L.P., and (ii) 15,277,917 shares of common stock issuable upon conversion of shares of the Issuer's Series A Convertible Preferred Stock held by Deerfield Private Design Fund IV, L.P. James E. Flynn is the sole member of the general partner of each of Deerfield Mgmt, L.P., Deerfield Mgmt III, L.P., Deerfield Mgmt IV, L.P. and Deerfield Management Company, L.P. Deerfield Management Company, L.P. is the investment manager of each of Deerfield Special Situations Fund, L.P., Deerfield Private Design Fund III, L.P., Deerfield Private Design Fund IV, L.P. and Deerfield Partners, L.P. Deerfield Mgmt III, L.P. is the general partner of Deerfield Private Design Fund III, L.P. Deerfield Mgmt IV, L.P. is the general partner of Deerfield Private Design Fund IV, L.P. Deerfield Mgmt, L.P. is the general partner of each of Deerfield Special Situations Fund, L.P. and Deerfield Partners, L.P.

(10) See footnote 2.

This Amendment No. 4 (this "Amendment") to Schedule 13D amends the Schedule 13D (as previously amended, the "Schedule 13D") filed by (i) Deerfield Mgmt, L.P. ("Deerfield Mgmt"), (ii) Deerfield Management Company, L.P. ("Deerfield Management"), (iii) Deerfield Mgmt III, L.P. ("Deerfield Mgmt III"), (iv) Deerfield Special Situations Fund, L.P. ("Deerfield Special Situations Fund"), (v) Deerfield Partners, L.P. ("Deerfield Partners"), (vi) Deerfield Private Design Fund III, L.P. ("Deerfield Private Design Fund III"), (vii) Deerfield Private Design Fund IV, L.P. ("Deerfield Private Design Fund IV"), (viii) Deerfield Mgmt, L.P. ("Deerfield Mgmt IV"), (ix) James E. Flynn ("Flynn") and, collectively with Deerfield Mgmt, Deerfield Management, Deerfield Mgmt III, Deerfield Special Situations Fund, Deerfield Partners, Deerfield Private Design Fund III, Deerfield Private Design Fund IV and Deerfield Mgmt IV, the "Reporting Persons") and certain other persons, with respect to the securities of Proteon Therapeutics, Inc., as amended by Amendment Nos. 1, 2 and 3 to the Schedule 13D filed on August 4, 2017, August 22, 2017 and December 4, 2017, respectively. Deerfield Special Situations Fund, Deerfield Partners, Deerfield Private Design Fund III and Deerfield Private Design Fund IV are collectively referred to herein as the "Funds."

Capitalized terms used herein but not otherwise defined herein shall have the meanings ascribed to them in the Schedule 13D.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 of the Schedule 13D is hereby amended by adding the following:

On November 7, 2019, Deerfield Private Design Fund IV converted 800 shares of Series A Convertible Preferred Stock, with an aggregate stated value of \$800,000 and at a conversion price of \$0.9949 per share, into an aggregate of 804,101 shares of the Company's common stock in accordance with the Certificate of Designation.

Item 4. Purpose of Transaction.

Item 4 of the Schedule 13D is hereby amended by adding the following:

As previously announced by the Company, the Company and ArTara Therapeutics, Inc. ("ArTara") have entered into an Agreement and Plan of Merger and Reorganization, pursuant to which a wholly-owned subsidiary of the Company will merge with and into ArTara, with ArTara surviving as a wholly-owned subsidiary of the Company (the "Merger"). After discussion with the Company, Deerfield Private Design Fund IV determined to convert, and converted, 800 of its 16,000 shares of Series A Convertible Preferred Stock into shares of the Company's common stock (the "Conversion Shares") pursuant to a conversion notice delivered to the Company on November 7, 2019, in advance of the November 12, 2019 record date (as disclosed in the Form S-4 filed by the Company in connection with the Merger on November 7, 2019) for determining the holders of the Company's common stock that will be entitled to vote at any special meeting of stockholders called for the purpose of approving certain proposals relating to the Merger (the "Special Meeting"). Although Deerfield Private Design Fund IV will be entitled to vote such Conversion Shares at the Special Meeting, no Reporting Person has entered into any agreement with the Company or any other person, or is otherwise obligated, to vote any of its shares, including the Conversion Shares, in favor of any of such proposals or any other matter, or to vote any such shares at all.

Item 5. Interests in Securities of the Issuer

Items 5(a), (b) and (c) of the Schedule 13D are hereby amended and restated as follows

(a)

(1) Deerfield Special Situations Fund

Number of shares: 149,676
Percentage of shares: 0.73%*

(2) Deerfield Partners

Number of shares: 197,424
Percentage of shares: 0.97%*

(3) Deerfield Private Design Fund III

Number of Shares: 877,799
Percentage of Shares: 4.31%*

(4) Deerfield Private Design Fund IV

Number of Shares: 16,082,018
Percentage of Shares: 9.985%*

(5) Deerfield Mgmt

Number of shares: 347,100
Percentage of shares: 1.70%*

(6) Deerfield Mgmt III

Number of Shares: 877,799
Percentage of Shares: 4.31%*

(7) Deerfield Mgmt IV

Number of Shares: 16,082,018
Percentage of Shares: 9.985%*

(8) Deerfield Management

Number of shares: 17,306,917
Percentage of shares: 9.985%*

(9) Flynn

Number of shares: 17,306,917
Percentage of shares: 9.985%*

*Percentage beneficial ownership reported herein reflects (i) 19,585,394 shares of common stock outstanding as of October 28, 2019, as reported in the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2019, plus (ii) 804,101 shares of common stock issued as a result of the conversion of 800 shares of Series A Convertible Preferred Stock by Deerfield Private Design Fund IV pursuant to a conversion notice delivered to the Company on November 7, 2019.

(b)

(1) Deerfield Special Situations Fund

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 149,676
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 149,676

(2) Deerfield Partners

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 197,424
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 197,424

(3) Deerfield Private Design Fund III

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 877,799
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 877,799

(4) Deerfield Private Design Fund IV

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 16,082,018
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 16,082,018

(5) Deerfield Mgmt

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 347,100
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 347,100

(6) Deerfield Mgmt III

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 877,799
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 877,799

(7) Deerfield Mgmt IV

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 16,082,018
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 16,082,018

(8) Deerfield Management

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 17,306,917
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 17,306,917

(9) Flynn

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 17,306,917
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 17,306,917

Flynn is the sole member of the general partner of each of Deerfield Mgmt, Deerfield Mgmt III, Deerfield Mgmt IV and Deerfield Management. Deerfield Mgmt is the general partner of Deerfield Special Situations Fund and Deerfield Partners. Deerfield Mgmt III is the general partner of Deerfield Private Design Fund III. Deerfield Mgmt IV is the general partner of Deerfield Private Design Fund IV. Deerfield Management is the investment manager of each of Deerfield Special Situations Fund, Deerfield Private Design Fund III, Deerfield Partners and Deerfield Private Design Fund IV.

(c) Except as set forth in Items 3 and 4, the Reporting Persons have not engaged in any transactions in the Company's securities during the past 60 days.

SIGNATURE

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

Dated: November 8, 2019

DEERFIELD MGMT, L.P.

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

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD MGMT III, L.P.

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

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD MGMT IV, L.P.

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

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD SPECIAL SITUATIONS FUND, L.P.

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

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

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: 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

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD PRIVATE DESIGN FUND III, L.P.
By: Deerfield Mgmt III, L.P., General Partner
By: J.E. Flynn Capital III, LLC, General Partner

By: /s/ Jonathan Isler
Name: Jonathan Isler
Title: Attorney-in-Fact

DEERFIELD PRIVATE DESIGN FUND IV, L.P.
By: Deerfield Mgmt IV, L.P., General Partner
By: J.E. Flynn Capital IV, LLC, General Partner

By: /s/ Jonathan Isler
Name: Jonathan Isler
Title: Attorney-in-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.
By: Flynn Management LLC, General Partner

By: /s/ Jonathan Isler
Name: Jonathan Isler
Title: Attorney-in-Fact

JAMES E. FLYNN

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