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

**SCHEDULE 13G**

Under the Securities Exchange Act of 1934  
(Original Filing)\*

**APREA THERAPEUTICS INC**

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(Name of Issuer)

COMMON STOCK

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(Title of Class of Securities)

**03836J102**

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(CUSIP Number)

**DECEMBER 31, 2019**

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(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)  
 Rule 13d-1(c)  
 **Rule 13d-1(d)**

\*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.

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 ("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).

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
**New Emerging Medical Opportunities Fund III, L.P., an exempted limited partnership**

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization : **Cayman Islands**

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power <b>1,470,339</b>
	6. Shared Voting Power -0-
	7. Sole Dispositive Power <b>1,470,339</b>
	8. Shared Dispositive Power -0-

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9. Aggregate Amount Beneficially Owned by Each Reporting Person **1,470,339**

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).

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11. Percent of Class Represented by Amount in Row (9) **7.0%**

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12. Type of Reporting Person (See Instructions)  
**PN**

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

Sectoral GP III, L.P., general partner of New Emerging Medical Opportunities Fund III, L.P.

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2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

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3. SEC Use Only
- 

4. Citizenship or Place of Organization : Canada
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5. Sole Voting Power 1,470,339

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Number of  
Shares  
Beneficially  
Owned by  
Each Reporting  
Person With

6. Shared Voting Power -0-

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7. Sole Dispositive Power 1,470,339

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8. Shared Dispositive Power -0-

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9. Aggregate Amount Beneficially Owned by Each Reporting Person 1,470,339
- 

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).
- 

11. Percent of Class Represented by Amount in Row (9) 7.0%
- 

12. Type of Reporting Person (See Instructions)

PN

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
**New Emerging Medical Opportunities Fund III, L.P.**

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

---

3. SEC Use Only

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4. Citizenship or Place of Organization : **Cayman Islands**

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power <b>1,470,339</b>
	6. Shared Voting Power -0-
	7. Sole Dispositive Power <b>1,470,339</b>
	8. Shared Dispositive Power -0-

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9. Aggregate Amount Beneficially Owned by Each Reporting Person **1,470,339**

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).

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11. Percent of Class Represented by Amount in Row (9) **7.0%**

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12. Type of Reporting Person (See Instructions)  
**PN**

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
**Sectoral GP III, L.P.**

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization : **Canada**

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power <b>1,470,339</b>
	6. Shared Voting Power -0-
	7. Sole Dispositive Power <b>1,470,339</b>
	8. Shared Dispositive Power -0-

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9. Aggregate Amount Beneficially Owned by Each Reporting Person **1,470,339**

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).

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11. Percent of Class Represented by Amount in Row (9) **7.0%**

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12. Type of Reporting Person (See Instructions)  
**PN**

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1. Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
**Sectoral Asset Management Inc.**

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2. Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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3. SEC Use Only

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4. Citizenship or Place of Organization : Canada

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Number of Shares Beneficially Owned by Each Reporting Person With	5. Sole Voting Power	<b>1,470,339</b>
	6. Shared Voting Power	-0-
	7. Sole Dispositive Power	<b>1,470,339</b>
	8. Shared Dispositive Power	-0-

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9. Aggregate Amount Beneficially Owned by Each Reporting Person **1,470,339**

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10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).

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11. Percent of Class Represented by Amount in Row (9) **7.0%**

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12. Type of Reporting Person (See Instructions)  
**IA**

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1.	Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).
	<b>Jérôme G. Pfund</b>

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2.	Check the Appropriate Box if a Member of a Group (See Instructions)
(a)	<input type="checkbox"/>
(b)	<input type="checkbox"/>

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3.	SEC Use Only
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4.	Citizenship or Place of Organization : Swiss
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Number of Shares Beneficially Owned by Each Reporting Person With	5.	Sole Voting Power	<b>1,470,339</b>
	6.	Shared Voting Power	-0-
	7.	Sole Dispositive Power	<b>1,470,339</b>
	8.	Shared Dispositive Power	-0-

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9.	Aggregate Amount Beneficially Owned by Each Reporting Person	<b>1,470,339</b>
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10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).
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11.	Percent of Class Represented by Amount in Row (9)	<b>7.0%</b>
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12.	Type of Reporting Person (See Instructions)
	IN

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1.	Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only).	
		Michael L. Sjöström

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2.	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a)	<input type="checkbox"/>
	(b)	<input type="checkbox"/>

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3.	SEC Use Only	
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4.	Citizenship or Place of Organization : Swiss	
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	5.	Sole Voting Power	1,470,339
Number of Shares Beneficially Owned by Each Reporting Person With	6.	Shared Voting Power	-0-
	7.	Sole Dispositive Power	1,470,339
	8.	Shared Dispositive Power	-0-

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9.	Aggregate Amount Beneficially Owned by Each Reporting Person	1,470,339
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10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions).	
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11.	Percent of Class Represented by Amount in Row (9)	7.0%
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12.	Type of Reporting Person (See Instructions)	IN
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- Item 1.**
- (a) Name of Issuer:  
Aprea Therapeutics, Inc.
- (b) Address of Issuer's Principal Executive Offices:  
535 Boylston Street, Boston, MA 02116, United States
- Item 2.**
- (a) Name of Person(s) Filing:  
New Emerging Medical Opportunities Fund III, L.P.  
Sectoral GP III, L.P.  
Sectoral Asset Management Inc.  
Jérôme G. Pfund  
Michael L. Sjöström
- (b) Address of Principal Business Office or, if none, Residence:  
The principal business address of each of the Reporting Persons is:  
1610-1010 Sherbrooke St. West, Montreal QC, H3A 2R7 Canada
- (c) Citizenship:  
New Emerging Medical Opportunities Fund III, L.P. is organized under the laws of the Cayman Islands  
Sectoral GP III, L.P. is organized under the laws of Canada  
Sectoral Asset Management Inc. is a Canadian corporation  
Jérôme G. Pfund is a Swiss citizen  
Michael L. Sjöström is a Swiss citizen
- (d) Title of Class of Securities:  
Common Stock
- (e) CUSIP Number:  
03836J102
- Item 3.** If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:
- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d)  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e)  An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f)  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
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- (h)  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)  A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J);
- (k)  Group, in accordance with § 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution: \_\_\_\_\_

**Item 4.** Ownership.

New Emerging Medical Opportunities Fund III, L.P. ("Nemo III") is record owner of 1,470,339 common shares of the Issuer ("Nemo III shares"). Sectoral Asset Management Inc. is the investment adviser of Nemo III, and by virtue of such status may be deemed to be the beneficial owner of the Nemo III shares (240.13d-3(a)). Sectoral Asset Management Inc, in its capacity as investment adviser to Nemo III, has the sole right to dispose of or vote the number of shares of common stock of the Issuer set forth in this filing, and is the owner of the general partner (Sectoral GP III L.P.) of Nemo III. Jérôme G. Pfund and Michael L. Sjöström, together, indirectly hold majority of shares of Sectoral Asset Management Inc.

- (a) Amount beneficially owned:  
 New Emerging Medical Opportunities Fund III, L.P.: 1,470,339 shares  
 Sectoral GP III, L.P.: 1,470,339 shares  
 Sectoral Asset Management Inc.: 1,470,339 shares  
 Jérôme G. Pfund: 1,470,339 shares  
 Michael L. Sjöström: 1,470,339 shares
  - (b) Percent of class:  
 New Emerging Medical Opportunities Fund III, L.P.: 7.0%  
 Sectoral GP III, L.P.: 7.0%  
 Sectoral Asset Management Inc.: 7.0%  
 Jérôme G. Pfund: 7.0%  
 Michael L. Sjöström: 7.0%
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- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote:  
New Emerging Medical Opportunities Fund III, L.P.: 1,470,339 shares  
Sectoral GP III, L.P.: 1,470,339 shares  
Sectoral Asset Management Inc.: 1,470,339 shares  
Jérôme G. Pfund: 1,470,339 shares  
Michael L. Sjöström: 1,470,339 shares
  - (ii) Shared power to vote or to direct the vote  
Not applicable
  - (iii) Sole power to dispose or to direct the disposition of  
New Emerging Medical Opportunities Fund III, L.P.: 1,470,339 shares  
Sectoral GP III, L.P.: 1,470,339 shares  
Sectoral Asset Management Inc.: 1,470,339 shares  
Jérôme G. Pfund: 1,470,339 shares  
Michael L. Sjöström: 1,470,339 shares
  - (iv) Shared power to dispose or to direct the disposition of  
Not applicable.

**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

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

See Item 4.

**Item 7.** Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

Not applicable.

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

Not applicable.

**Item 9.** Notice of Dissolution of Group.

Not applicable.

**Item 10.** Certification.

Not applicable

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**SIGNATURE**

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

Dated: February 11, 2020

SECTORAL ASSET MANAGEMENT INC.

/s/Marc-Andre Marcotte

By: Marc-Andre Marcotte

Its: Chief Operating Officer

Dated: February 11, 2020

/s/Jérôme G. Pfund

Jérôme G. Pfund

Dated: February 11, 2020

/s/Michael L. Sjöström

Michael L. Sjöström

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AGREEMENT

Each of the undersigned, pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, hereby agrees that only one statement containing the information required by Schedule 13G needs be filed with respect to the ownership by each of the undersigned of the shares of common stock of **Aprea Therapeutics, Inc.** and that the Schedule 13G to which this Agreement is appended as Exhibit A is to be filed with the Securities and Exchange Commission on behalf of each of the undersigned on or about the date hereof.

EXECUTED as a sealed instrument this 11<sup>th</sup> day of February 2020.

SECTORAL ASSET MANAGEMENT INC.

/s/ Marc-Andre Marcotte

By: Marc-Andre Marcotte

Its: Chief Operating Officer

/s/Jérôme G. Pfund

Jérôme G. Pfund

/s/Michael L. Sjöström

Michael L. Sjöström

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