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

SCHEDULE 13G

**Under the Securities Exchange Act of 1934
(Amendment No.)***

Spero Therapeutics, Inc.
(Name of Issuer)

Common Stock, par value \$0.001 per share
(Title of Class of Securities)

84833T103
(CUSIP Number)

November 6, 2017
(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 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.	NAMES OF REPORTING PERSONS Lundbeckfond Invest A/S (“Lundbeckfond”)	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION Denmark	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER 1,091,774 shares of common stock, except that (i) Lene Skole (“Skole”), chief executive officer of Lundbeckfond, may be deemed to have sole power to vote these shares; and (ii) Casper Breum (“Breum”), senior partner of Lundbeckfond and a member of the Board of Directors of the Issuer, may be deemed to have shared power to vote these shares.
	6.	SHARED VOTING POWER See response to row 5 above.
	7.	SOLE DISPOSITIVE POWER 1,091,774 shares of common stock, except that (i) Skole, chief executive officer of Lundbeckfond, may be deemed to have sole power to dispose of these shares; and (ii) Breum, senior partner of Lundbeckfond and a member of the Board of Directors of the Issuer, may be deemed to have shared power to dispose of these shares.
	8.	SHARED DISPOSITIVE POWER See response to row 7 above.
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,091,774 shares of common stock	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 7.6%	
12.	TYPE OF REPORTING PERSON (see instructions) FI	

1.	NAMES OF REPORTING PERSONS Lene Skole ("Skole")	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION Denmark	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER 1,091,774 shares of common stock held directly by Lundbeckfond, except that Breum, senior partner Lundbeckfond and a member of the Board of Directors of the Issuer, may be deemed to have shared power to vote these shares.
	6.	SHARED VOTING POWER See response to row 5 above.
	7.	SOLE DISPOSITIVE POWER 1,091,774 shares of common stock held directly by Lundbeckfond, except that Breum, senior partner of Lundbeckfond and a member of the Board of Directors of the Issuer, may be deemed to have shared power to dispose of these shares.
	8.	SHARED DISPOSITIVE POWER See response to row 7 above.
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,091,774 shares of common stock	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 7.6%	
12.	TYPE OF REPORTING PERSON (see instructions) IN	

1.	NAMES OF REPORTING PERSONS Casper Breum	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION Denmark	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER See response to row 6 below.
	6.	SHARED VOTING POWER 1,091,774 shares of common stock held directly by Lundbeckfond, except that Skole, chief executive officer of Lundbeckfond, may be deemed to have sole power to vote these shares.
	7.	SOLE DISPOSITIVE POWER See response to row 8 below.
	8.	SHARED DISPOSITIVE POWER 1,091,774 shares of common stock held directly by Lundbeckfond, except that Skole, chief executive officer of Lundbeckfond, may be deemed to have sole power to dispose of these shares.
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,091,774 shares of common stock	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 7.6%	
12.	TYPE OF REPORTING PERSON (see instructions) IN	

Item 1.

- (a) Name of Issuer
Spero Therapeutics, Inc.
- (b) Address of Issuer's Principal Executive Offices
675 Massachusetts Avenue, 14th Floor
Cambridge, MA 02139

Item 2.

- (a) Name of Each Person Filing
This Schedule 13G is being filed on behalf of each of the following persons:
Lundbeckfond Invest A/S (the "Lundbeckfond")
Lene Skole ("Skole")
Casper Breum ("Breum")
The foregoing entities and individuals are collectively referred to as the "Reporting Persons."
Skole is the chief executive officer of Lundbeckfond. The directors of Lundbeckfond have delegated voting and dispositive power with respect to shares held by Lundbeckfond to Skole. Breum is a senior partner of Lundbeckfond and a member of the Board of Directors of the Issuer.
- (b) Address or the Principal Office or, if none, residence of each Person Filing
The business address for each Reporting Person is:
c/o Lundbeckfond Invest A/S
Scherfigsvej 7
DK-2100 Copenhagen, Denmark
- (c) Citizenship
Lundbeckfond is a private Danish corporation.
Each of Skole and Breum are citizens of Denmark.
- (d) Title of Class of Securities
Common Stock, par value \$0.001 per share

- (e) CUSIP Number
84833T103

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:

Not applicable.

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: See row 9 of cover page for each Reporting Person.
(b) Percent of class: See row 11 of cover page for each Reporting Person.
(c) Number of shares as to which the person has:

- (i) Sole power to vote or to direct the vote:

See row 5 of cover page for each Reporting Person.

- (ii) Shared power to vote or to direct the vote:

See row 6 of cover page for each Reporting Person.

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

See row 7 of cover page for each Reporting Person.

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

See row 8 of cover page for each Reporting Person.

The approximate percentages of common stock reported as beneficially owned by the Reporting Persons are based upon 14,369,182 shares of common stock outstanding as of November 30, 2017, as reported on the Issuer's Form 10-Q Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, as filed with the United States Securities and Exchange Commission on December 14, 2017.

Each of the Reporting Persons, except Lundbeckfond, disclaims beneficial ownership of the shares owned by Lundbeckfond, except to the extent of their respective pecuniary interests therein.

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

Not applicable.

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

Under certain circumstances set forth in the governing documents of Lundbeckfond, the stockholders of Lundbeckfond may be deemed to have the right to receive dividends from, or the proceeds from, the sale of shares of the Issuer.

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

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.

Material to be Filed as Exhibits.

Exhibit 1 – Agreement regarding filing of joint Schedule 13G.

Exhibit 2 – Power of Attorney.

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.

Date: February 13, 2018

LUNDBECKFOND INVEST A/S

By: * _____

Name: Lene Skole

Title: Chief Executive Officer & Attorney-in-Fact

By: * _____

Name: Mette Kirstine Agger

Title: Attorney-in-Fact

LENE SKOLE

/s/ Lene Skole _____

CASPER BREUM

/s/ Casper Breum _____

/s/ Lene Skole

LENE SKOLE

*As attorney-in-fact for Lundbeckfond Invest A/S.

/s/ Mette Kirstine Agger

METTE KIRSTINE AGGER

*As attorney-in-fact for Lundbeckfond Invest A/S.

* This Schedule 13G was executed by Lene Skole and Mette Kristine Agger on behalf of the entity listed above, as indicated, pursuant to that certain Power of Attorney, a copy of which is attached to this Schedule 13G as Exhibit 2.

EXHIBIT 1

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13G need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of Spero Therapeutics, Inc.

Date: February 13, 2018

LUNDBECKFOND INVEST A/S

By: * _____
Name: Lene Skole
Title: Chief Executive Officer & Attorney-in-Fact

By: * _____
Name: Mette Kirstine Agger
Title: Attorney-in-Fact

LENE SKOLE

/s/ Lene Skole

CASPER BREUM

/s/ Casper Breum

/s/ Lene Skole

LENE SKOLE

*As attorney-in-fact for Lundbeckfond Invest A/S.

/s/ Mette Kirstine Agger

METTE KIRSTINE AGGER

*As attorney-in-fact for Lundbeckfond Invest A/S.

* This Schedule 13G was executed by Lene Skole and Mette Kristine Agger on behalf of the entity listed above, as indicated, pursuant to that certain Power of Attorney, a copy of which is attached to this Schedule 13G as Exhibit 2.

POWER OF ATTORNEY

21 November 2017

Authorized signatures for Lundbeckfonden and Lundbeckfond Invest A/S

Signatures & Power of Attorney

The following persons are hereby authorized to sign - two in conjunction - for Lundbeckfonden (CVR no. 11814913) and Lundbeckfond Invest A/S (CVR no. 21855545) in all matters regarding our financial transactions in the ordinary course of business, including investments and other transactions in relation to Lundbeckfonden Ventures and/or Lundbeckfonden Emerge:

(1+2) or (1+3) or (1+4) as well as

(2+3) or (2+4) as well as

(3+4, save for transactions in relation to Lundbeckfonden Ventures and/or Lundbeckfonden Emerge),

1. Board of Trustees: (A-mandate):

Jurgen Huno Rasmussen, Chairman : /s/ Jurgen Huno Rasmussen
Steffen Kragh, Deputy Chairman : /s/ Steffen Kragh

2. Management: (A-mandate):

Lene Skole, Chief Executive Officer : /s/ Lene Skole

3. Other Management: (C-mandate):

Mette Kirstine Agger, Managing Partner : /s/ Mette Kirstine Agger
Soren Christiansen, Vice President Finance : /s/ Soren Christiansen
Christian E. Elling, Managing Partner : /s/ Christian E. Elling
Bertil From, Chief Financial Officer : /s/ Bertil From

4. Signatures together with the other management, management or Board of Trustees (B-mandate):

Susanne Bjarnov Bemth, Senior Investment Controller : /s/ Susanne Bjarnov Bernth
Dorthe Mathiasen, Accountant : /s/ Dorthe Mathiasen
Britt Wilder, Executive Secretary : /s/ Britt Wilder

This Power of Attorney replaces the Power of Attorney dated February 2017 and is valid until it is withdrawn in writing.

On behalf of Lundbeckfonden / Lundbeckfond Invest A/S

/s/ Jørgen Huno Rasmussen
Jørgen Huno Rasmussen
Chairman of the Board of
Lundbeckfonden &
Lundbeckfond Invest A/S

/s/ Steffen Kragh
Steffen Kragh
Deputy Chairman
Lundbeckfonden &
Lundbeckfond Invest A/S