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

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**FORM S-8  
REGISTRATION STATEMENT**  
*UNDER  
THE SECURITIES ACT OF 1933*

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**Ascendis Pharma A/S**  
(Exact name of registrant as specified in its charter)

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**The Kingdom of Denmark**  
(State or other jurisdiction of incorporation or organization)

**Not Applicable**  
(IRS Employer Identification No.)

**Tuborg Boulevard 12  
DK-2900 Hellerup, Denmark**  
(Address of Principal Executive Offices) (Zip Code)

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**Incentive Scheme pursuant to Appendix 1 to the Articles of Association of Ascendis Pharma A/S**  
(Full title of the plan)

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**Scott T. Smith**  
**Senior Vice President, Chief Financial Officer**  
**Ascendis Pharma, Inc.**  
**500 Emerson Street**  
**Palo Alto, California USA 94301**  
(Name and address of agent for service)

**(650) 352-8389**  
(Telephone number, including area code, of agent for service)

*Copies to:*

**Mark V. Roeder, Esq.**  
**Latham & Watkins LLP**  
**140 Scott Drive**  
**Menlo Park, CA 94025**  
**(650) 328-4600**

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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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**CALCULATION OF REGISTRATION FEE**

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Title of Securities To Be Registered*	Amount To Be Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Ordinary shares, DKK 1 nominal value per share	3,612,625 <sup>(2)</sup>	\$58.29 <sup>(3)</sup>	\$210,579,911.25 <sup>(3)</sup>	\$25,522.29
Ordinary shares, DKK 1 nominal value per share	387,375 <sup>(4)</sup>	\$64.88 <sup>(5)</sup>	\$25,132,890.00	\$3,046.11
Total	4,000,000		\$235,712,801.25	\$28,568.40

\* The ordinary shares registered hereby may be represented by the Registrant's American Depositary Shares ("ADSs"), each of which represents one ordinary share. ADSs issuable upon deposit of the ordinary shares registered hereby have been registered under a separate registration statement on Form F-6 (Registration No. 333-201695).

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "**Securities Act**"), this registration statement (the "**Registration Statement**") shall also cover any additional ordinary shares of the Registrant that become issuable under the Incentive Scheme pursuant to Appendix 1 to the Articles of Association of Ascendis Pharma A/S (the "**Incentive Scheme**"), by reason of any share dividend, share split, bonus issue, recapitalization or similar transaction effected without the Registrant's receipt of consideration which would increase the number of outstanding ordinary shares.
- (2) Represents 3,612,625 ordinary shares available for future issuance under the Incentive Scheme.
- (3) This estimate is made pursuant to Rule 457(c) and Rule 457(h) of the Securities Act solely for purposes of calculating the registration fee. The Proposed Maximum Offering Price Per Share for shares available for future grant is the average of the high and low prices for the registrant's common stock as reported on the Nasdaq Global Select Market on November 21, 2018 which is \$58.29.
- (4) Represents 387,375 ordinary shares subject to outstanding awards under the Incentive Scheme.
- (5) This estimate is made pursuant to Rule 457(h) of the Securities Act for purposes of calculating the registration fee. The price per share and aggregate offering price are calculated on the basis of \$64.88, the weighted average exercise price per share of the shares subject to outstanding awards under the Incentive Scheme.

**Proposed sale to take place as soon after the effective date of the  
Registration Statement as awards under the plans are granted and/or exercised.**

**PART I**  
**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the “**Commission**”).

**PART II**  
**INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

**Item 3. Incorporation of Documents by Reference.**

The information incorporated by reference herein is considered to be part of this Registration Statement, and later information filed with the Commission will update and supersede this information. The following documents filed by the Registrant with the Commission are incorporated herein by reference:

- (a) The Annual Report on Form 20-F for the year ended December 31, 2017, filed by the Registrant with the Commission on March 28, 2018 (File No. 001-36815).
- (b) The Report of Foreign Private Issuer on Form 6-K filed with the Commission on January 3, 2018, January 10, 2018, February 15, 2018, February 20, 2018, February 26, 2018, March 15, 2018, April 12, 2018, May 9, 2018, May 31, 2018, June 6, 2018, June 15, 2018, June 29, 2018, July 12, 2018, August 13, 2018, August 17, 2018, September 12, 2018, September 13, 2018, October 1, 2018, October 2, 2018, October 3, 2018, October 12, 2018, November 2, 2018, November 8, 2018 and November 16, 2018 (File No. 001-36815).
- (c) The information contained in Exhibits 99.1 and 99.2 of the Reports on Form 6-K filed with the SEC on May 30, 2018, August 29, 2018 and November 28, 2018 (File No. 001-36815).
- (d) The description of the Registrant’s ordinary shares and American Depositary Shares contained in the Registrant’s registration statement on Form 8-A (File No. 001-36815), filed by the Registrant with the Commission under Section 12(b) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), on January 26, 2015, including any amendments or reports filed for the purpose of updating such description.

All documents that the Registrant subsequently files pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment to this Registration Statement which indicates that all of the ordinary shares offered have been sold or which deregisters all of such shares then remaining unsold, and any Form 6-K submitted during such period (or portion thereof) that is identified in such form as being incorporated by reference into this Registration Statement, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of the filing of such documents.

**Item 4. Description of Securities.**

Not applicable.

**Item 5. Interests of Named Experts and Counsel.**

Not applicable.

**Item 6. Indemnification of Directors and Officers.**

According to the Danish Companies Act, the general meeting is allowed to discharge the Registrant’s board members and members of the Registrant’s senior management from liability for any particular financial year based on a resolution relating to the financial statements. This discharge means that the general meeting will discharge such board members and members of the Registrant’s senior management from liability to the Registrant; however, the general meeting cannot discharge any claims by individual shareholders or other third parties.

Additionally, the Registrant intends to enter, or has entered, into agreements with its board members and members of its senior management, pursuant to which, subject to limited exceptions, the Registrant will agree, or has agreed, to indemnify such board members and members of its senior management from civil liability, including (i) any damages or fines payable by them as a result of an act or failure to act in the exercise of their duties currently or previously performed by them; (ii) any reasonable costs of conducting a defense against a claim; and (iii) any reasonable costs of appearing in other legal proceedings in which such individuals are involved as current or former board members or members of senior management.

There is a risk that such agreement will be deemed void under Danish law, either because the agreement is deemed contrary to the rules on discharge of liability in the Danish Companies Act, as set forth above, because the agreement is deemed contrary to sections 19 and 23 of the Danish Act on Damages, which contain mandatory provisions on recourse claims between an employee (including members of the Registrant's senior management) and the Registrant, or because the agreement is deemed contrary to the general provisions of the Danish Contracts Act.

In addition to such indemnification, the Registrant provides its board members and senior management with directors' and officers' liability insurance.

Insofar as indemnification of liabilities arising under the Securities Act may be permitted to board members and senior management or persons controlling the Registrant pursuant to the foregoing provisions, the Registrant has been informed that, in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

#### Item 7. Exemption From Registration Claimed.

Not applicable.

#### Item 8. Exhibits.

Exhibit Number	Exhibit Description	Incorporated by Reference to Filings Indicated				Provided Herewith
		Form	File No.	Exhibit No.	Filing Date	
4.1	<a href="#">Articles of Association, currently in effect (English translation).</a>	6-K	001-36815	1.1	11/16/2018	
4.2	<a href="#">Deposit Agreement dated January 27, 2015 among Ascendis Pharma A/S, The Bank of New York Mellon, and Owners and Holders of American Depositary Shares.</a>	F-3	333-209336	4.2	2/2/2016	
4.3	<a href="#">Form of American Depositary Receipt (included in Exhibit 4.2).</a>					
5.1	<a href="#">Opinion of Mazanti-Andersen Korsø Jensen.</a>					X
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm.</a>					X
23.2	<a href="#">Consent of Mazanti-Andersen Korsø Jensen (included in Exhibit 5.1).</a>					X
24.1	<a href="#">Powers of Attorney (incorporated by reference to the signature page hereto).</a>					X
99.1(a)	<a href="#">Reference is made to Exhibit 4.1.</a>					
99.1(b)	<a href="#">Form of Warrant Certificate.</a>	20-F	001-36815	4.4(c)	4/15/2016	

## Item 9. Undertakings.

1. The undersigned Registrant hereby undertakes:
  - a. To file, during any period in which offers or sales are being made pursuant to this Registration Statement, a post-effective amendment to this Registration Statement:
    - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
    - (ii) To reflect in the prospectus any facts or events arising after the effective date of this 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 this 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 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
    - (iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;
  - Provided, however,* that: paragraphs (1)(a)(i) and (1)(a)(ii) above do not apply if 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 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.
  - b. That, for the purpose of determining any liability under the Securities Act, 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.
  - c. 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.
2. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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.
3. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described under "Item 6—Indemnification of Directors and Officers," or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities 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 Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Hellerup, Denmark, on this 28th day of November, 2018.

Ascendis Pharma A/S

By: /s/ Jan Møller Mikkelsen

Name: Jan Møller Mikkelsen

Title: President and Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints Jan Møller Mikkelsen, Scott T. Smith and Michael Wolff Jensen, and each of them, as attorneys-in-fact, each with the power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) or supplements to this Registration Statement, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Commission, granting unto said attorneys-in-fact and agents, and each of them, 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 or she might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Jan Møller Mikkelsen</u> Jan Møller Mikkelsen	President, Chief Executive Officer, Board Member and Executive Director (Principal Executive Officer)	November 28, 2018
<u>/s/ Scott T. Smith</u> Scott T. Smith	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	November 28, 2018
<u>/s/ Peter Rasmussen</u> Peter Rasmussen	Vice President, Finance (Principal Accounting Officer)	November 28, 2018
<u>/s/ Michael Wolff Jensen</u> Michael Wolff Jensen, L.L.M.	Chairman of the Board of Directors	November 28, 2018
<u>/s/ Albert Cha</u> Albert Cha, M.D., Ph.D.	Board Member	November 28, 2018
<u>/s/ James I. Healy</u> James I. Healy, M.D., Ph.D.	Board Member	November 28, 2018
<u>/s/ Lisa Bright</u> Lisa Bright	Board Member	November 28, 2018
<u>/s/ Birgitte Volck</u> Birgitte Volck, M.D., Ph.D.	Board Member	November 28, 2018
<u>/s/ Lars Holtug, M.Sc.</u> Lars Holtug, M.Sc.	Board Member	November 28, 2018

AUTHORIZED REPRESENTATIVE IN THE UNITED STATES

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-8 has been signed by the undersigned as the duly authorized representative in the United States of Ascendis Pharma A/S in the City of Palo Alto, State of California, on November 28, 2018.

Ascendis Pharma, Inc.

By: /s/ Scott T. Smith

Name: Scott T. Smith

Title: Senior Vice President, Chief Financial Officer

Ascendis Pharma A/S  
Tuborg Boulevard 12  
2900 Hellerup

**Re: Registration Statement on Form S-8 of Ascendis Pharma A/S**

28.11.2018  
Ref. 58917  
ID 1793

Dear Sirs

**Lars Lütjohan Jensen**  
Attorney-at-law  
+45 3319 3749  
llj@mazanti.dk

We have acted as Danish counsel to Ascendis Pharma A/S (the “Company”) in connection with the registration of up to 4,000,000 ordinary shares of the Company that are available for issuance pursuant to warrants on the terms of the incentive scheme set forth in Appendix 1 to the Company’s articles of association (the “Articles of Association”) (collectively, the “Incentive Shares”).

In connection with the opinion expressed herein, we have examined such documents, records and matters of law as we have deemed relevant or necessary for purposes of this opinion.

Based on the foregoing, and subject to the further limitations, qualifications and assumptions set forth herein, we are of the opinion that the Incentive Shares that may be issued following exercise of the warrants have been duly authorized and, when issued in accordance with the terms of the respective warrants and against payment of due consideration therefor, will be validly issued, fully paid and non-assessable.

Non-assessable shall in this context mean, in relation to a share, that the issuer of the share has no right to require the holder of the share to pay to the issuer any amount (in addition to the amount required for the share to be fully paid) solely as a result of his shareholding.

The opinion expressed herein is limited to the laws of Denmark as currently in effect, and we express no opinion as to the effect of the laws of any other jurisdiction. We have assumed that the Company has taken no and will take no action inconsistent with the Danish Companies Act or the resolutions of its shareholders and its board of directors authorizing the Company to issue the warrants or the Incentive Shares.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement on Form S-8 filed by the Company to effect registration of the Incentive Shares to be issued and sold under the Securities Act of 1933 (the “Act”). In giving such consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.



Any and all liability and other matters relating to this opinion shall be governed exclusively by Danish law and the Danish courts shall have exclusive jurisdiction to settle any dispute relating to this opinion.

Yours faithfully

/s/ Anders Carstensen  
Anders Carstensen  
on behalf of  
Lars Lüthjohan Jensen  
Attorney-at-law

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 28, 2018, relating to the consolidated financial statements of Ascendis Pharma A/S and subsidiaries, appearing in the Annual Report on Form 20-F of Ascendis Pharma A/S for the year ended December 31, 2017.

**Deloitte Statsautoriseret Revisionspartnerselskab**

Copenhagen, Denmark  
November 28, 2018

/s/ Henrik Hjort Kjelgaard  
State Authorised  
Public Accountant

/s/ Max Damborg  
State Authorised  
Public Accountant