## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO SECTION 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of May, 2021

Commission File Number: 001-36815

# Ascendis Pharma A/S

(Exact Name of Registrant as Specified in Its Charter)

Tuborg Boulevard 12 DK-2900 Hellerup Denmark (Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F 🛛 Form 40-F	
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Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

#### **INCORPORATION BY REFERENCE**

This report on Form 6-K shall be deemed to be incorporated by reference into the registration statements on Form S-8 (Registration Numbers 333-228576, 333-203040, 333-210810, 333-211512, 333-213412, 333-214843 and 333-216883) and Form F-3 (Registration Numbers 333-209336, 333-211511, 333-216882, 333-223134 and 333-225284) of Ascendis Pharma A/S (the "Company") (including any prospectuses forming a part of such registration statements) and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

On May 10, 2021 the Company announced preliminary 58-week results from the continuing open-label extension (OLE) portion of the PaTH Forward Trial, a global phase 2 trial evaluating the safety, tolerability, and efficacy of its investigational product candidate, TransCon PTH, in adult subjects with hypoparathyroidism (HP).

TransCon PTH is an investigational once-daily long-acting prodrug of parathyroid hormone (PTH[1-34]) in development as a treatment for adult hypoparathyroidism designed to restore PTH at physiologic levels for 24 hours each day to address both the short-term symptoms and long-term complications of the disease.

#### Key Findings of the Preliminary OLE Results of PaTH Forward Trial at 58 weeks

- 58 subjects continue in the open-label extension beyond 58 weeks as of May 7, 2021
- Continued treatment with TransCon PTH demonstrated that:
  - o 91% of subjects were off standard of care therapy defined as no active vitamin D and £600 mg/day of calcium supplements
  - o Urinary calcium maintained in the normal range
  - o Bone markers trended towards the mid-normal levels
  - o Quality of life benefits measured by SF-36 continued within normal range
- TransCon PTH was well-tolerated at all doses administered
  - o No treatment-related serious or severe adverse events occurred, and no treatment-emergent adverse events led to discontinuation of study drug
  - o No change to the safety profile in the OLE portion of the study

#### **TransCon PTH Program Update**

In addition to PaTH Forward, Ascendis Pharma is conducting the PaTHway Trial, a North American and European phase 3 clinical study evaluating the safety, tolerability and efficacy of TransCon PTH in adults with HP. Topline results are expected from PaTHway in the fourth quarter of 2021.

Ascendis plans to submit a Clinical Trial Notification to the Pharmaceuticals and Medical Devices Agency in Japan during the second quarter of 2021 to initiate a phase 3 trial of TransCon PTH in adults with hypoparathyroidism.

#### Forward-Looking Statements

This report contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this report regarding Ascendis' future operations, plans and objectives of management are forward-looking statements. Examples of such statements include, but are not limited to, statements relating to Ascendis' expectations regarding the timing of topline results from PaTHway and Ascendis' plans to submit a Clinical Trial Notification to the Pharmaceuticals and Medical Devices Agency in Japan to initiate a phase 3 trial of TransCon PTH in adults with hypoparathyroidism. Ascendis may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in the forward-looking statements and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions, expectations and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially from the forward-looking statements that Ascendis makes, including the following: unforeseen safety or efficacy results in its oncology programs, TransCon hGH, TransCon PTH and TransCon CNP or other development programs; unforeseen expenses related to the development and potential commercialization of its oncology programs, TransCon hGH, TransCon PTH and TransCon CNP or other development programs, selling, general and administrative expenses, other research and development expenses and Ascendis' business generally; delays in the development of its oncology programs, TransCon hGH, TransCon PTH and TransCon CNP or other development programs related to manufacturing, regulatory requirements, speed of patient recruitment or other unforeseen delays; dependence on third party manufacturers to supply study drug for planned clinical studies; Ascendis' ability to obtain additional funding, if needed, to support its business activities and the effects on its business from the worldwide COVID-19 pandemic. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Ascendis' business in general, see Ascendis' Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission ("SEC") on March 10, 2021 and Ascendis' other future reports filed with, or submitted to, the SEC. Forward-looking statements do not reflect the potential impact of any future in-licensing, collaborations, acquisitions, mergers, dispositions, joint ventures, or investments that Ascendis may enter into or make. Ascendis does not assume any obligation to update any forward-looking statements, except as required by law.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

### Ascendis Pharma A/S

By: /s/ Michael Wolff Jensen

Michael Wolff Jensen Chairman and Senior Vice President, Chief Legal Officer

Date: May 10, 2021