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Executive Summary

- Validated TransCon technology platform and algorithm for product innovation
 - Two approved products SKYTROFA® (TransCon hGH) and YORVIPATH® (TransCon PTH)
 - Pivotal data and submission of NDA for TransCon CNP expected in Q4 2024
 - Oncology portfolio Phase 2 data expected in Q4 2024
 - Creation of Ophthalmology NewCo, financed by institutional investors, expected in Q1 2024
- SKYTROFA achieved U.S. market value leadership in 2023
 - Expected full year 2023 SKYTROFA revenue of ~€179 million¹
 - Full year 2024 SKYTROFA revenue expected to be €320 to €340 million²
- YORVIPATH® first launch in Germany January 2024
 - Rolling out to Europe Direct and International Markets starting in 2024
 - In the U.S., PDUFA goal date of May 14, 2024, and launch expected the following quarter, if approved
- Business model built on fast, successful drug development and commercial therapeutic synergies
- Expect to be operating cash flow breakeven on a quarterly basis by the end of 2024



¹ Unaudited preliminary estimate.

² Based on average 2023 exchange rates.

Vision 3x3: Building a Leading Global Biopharma Company

Our goal is to achieve sustainable growth through multiple approaches

- Obtain regulatory approval for three independent Endocrinology Rare Disease products
 - TransCon[™] hGH for pediatric growth hormone deficiency
 - TransCon[™] PTH for adult hypoparathyroidism
 - TransCon[™] CNP for achondroplasia
- **Grow Endocrinology Rare Disease pipeline through**
 - Global clinical reach
 - Pursuing 9 total indications, label optimization, and life cycle management
 - New endocrinology products
- Establish global commercial presence for our Endocrinology Rare Disease area
 - Build integrated commercial organization in North America and select European countries
 - Establish global commercial presence through partners with local expertise and infrastructure
- Advance a high-value oncology pipeline with one IND or similar filing each year
- Create a third independent therapeutic area with a diversified pipeline

Ascendis Pharma's 2020 - 2025 strategic roadmap





Endocrinology Rare Disease Pipeline & Ascendis Direct Commercialization

Endocrinology Rare Disease Products Approved in Major Markets

TransCon hGH

Pediatric Growth Hormone Deficiency





- United States¹
 Approved in the U.S. as SKYTROFA (lonapegsomatropin-tcgd)
- European Union² and Selected Other Countries³
 Approved in the EU as SKYTROFA (lonapegsomatropin)

TransCon PTH

Adult Chronic Hypoparathyroidism





European Union⁴ and Selected Other Countries⁵
 Approved in the EU as YORVIPATH (palopegteriparatide)
 First country launch planned in Germany in January 2024



^{1.} SKYTROFA® [package insert], Palo Alto, CA: Ascendis Pharma Inc. October 2022.

² SKYTROFA® SMPC. Hellerup, Denmark: Ascendis Pharma Inc. January 2022.

SKYTROFA® is also approved in Norway, Iceland, Lichtenstein and Great Britain (covering England, Wales, Scotland).

⁴ YORVIPATH® SMPC. Hellerup, Denmark: Ascendis Pharma Inc. November 2023.

^{5.} YORVIPATH® is also approved in Norway and Iceland.

TransCon hGH: Expanding Beyond Pediatric GHD

- Pediatric GHD accounts for approximately 50% of the hGH market by patients
- Growth hormone plays an essential role in the health of children and adults
 - Maintains normal body composition and cardiometabolic health
 - Promotes normal growth in children
- Daily hGH is approved for multiple indications in adult and pediatric patients
 - Adult GHD accounts for approximately 10% of the daily hGH market
 - However, fewer than 10% of adults with suspected GHD¹ are treated with hGH
- TransCon hGH Phase 3 foresiGHt Trial in adult GHD
 - Demonstrated superiority to placebo on primary and secondary efficacy endpoints
 - Demonstrated comparable results to daily hGH on primary and secondary endpoints²
 - Expected sBLA submission in Q2 2024



^{1.} A. Hoffman et al (2023). SAT611 Prevalence Of Comorbidities Among Treated And Untreated Adults With Suspected Growth Hormone Deficiency. Journal of the Endocrine Society. 7. 10.1210/jendso/bvad114.1344.

² Exploratory post-hoc analysis for patients with IGF-1 SDS levels ≤ 1.75 at Week 38.

SKYTROFA Revenue Development and Expectations

- SKYTROFA was launched in U.S. in Q4 2021, Germany in Q3 2023
 - SKYTROFA Q4 2023 revenue of ~€64 million*
 - Estimated SKYTROFA U.S. pediatric GHD market penetration exiting 2023 at ~16%
 - Expect full year 2024 SKYTROFA revenue of €320 €340 million**

Quarterly SKYTROFA Revenue (million)



Annual SKYTROFA Revenue (million)





^{*} Unaudited preliminary estimate.

^{**} Reflects 2024 SKYTROFA revenue expectations announced on Jan. 7, 2024, based on average 2023 exchange rates.

TransCon hGH Program Summary and Outlook

- Attained U.S. market value leadership in 2023
- Completed enliGHten Trial in pediatric GHD¹
 - Majority of patients met or exceeded average parental height SDS
 - Demonstrated the long-term safety in patients treated up to 6 years
- Planned sBLA submission to FDA for adult GHD Q2 2024
- Topline results from Phase 2 trial in Turner syndrome expected Q4 2024
- Expanding reach for SKYTROFA through Ascendis commercial organization building on therapeutic synergies
- Full year 2024 SKYTROFA revenue expected to be €320 to €340 million²

Committed to making TransCon hGH the global leading product in value in a growing growth hormone market

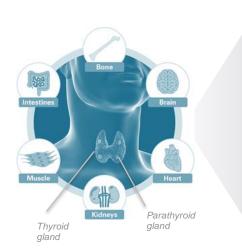


¹ Vlachopapadopoulou et al. Poster LB17, presented at ESPE 2023.

² Based on average 2023 exchange rates.

Hypoparathyroidism: One Disease, Multiple Consequences¹⁻⁴

Absence or deficiency of parathyroid hormone (PTH) is linked to multi-organ manifestations^{5,6}



CENTRAL NERVOUS SYSTEM

- Seizures
- Basal ganglia calcifications
- Parkinsonism or dystonia

RESPIRATORY

Laryngospasm

CARDIOVASCULAR

- Vascular calcifications
- Cardiac arrhythmias
- Hypocalcemia-associated dilated cardiomyopathy

RENAL

- Nephrocalcinosis*
- Nephrolithiasis*
- Chronic kidney disease*

PERIPHERAL NERVOUS SYSTEM

- Paresthesia
- Muscle cramps
- Pain
- Tetany

NEUROPSYCHIATRIC

- Anxiety & depression
- Cognitive impairment ("brain fog")

OPHTHALM ALOGICAL

- Cataracts
- Papilledema

DENTAL

Altered tooth morphology

DERMATOLOGICAL

- Drv skin
- Thinning hair
- Brittle nails

MUSCULOSKELETAL

- Myopathy
- Spondylorthropathy



These manifestations are mostly the result of treatment with calcium supplements and activated vitamin D rather than of the disease itself. 5

^{1.} Underbiera L. Sikiaer T. Mosekilde L. et al. Cardiovascular and renal complications to postsurgical hypoparathyroidism; a Danish nationwide controlled historic follow-up study. J Bone Miner Res. 2013;28(11):2277-2285. doi:10.1002/jbmr.1979.

² Underbjerg L, Sikjaer T, Mosekilde L, et al. The epidemiology of nonsurgical hypoparathyroidism in Denmark: a nationwide case finding study. J Bone Miner Res. 2015;30(9):1738-1744. doi:10.1002/jbmr.2501. 3. Shoback DM, Bilezikian JP, Costa AG, et al. Presentation of hypoparathyroidism: etiologies and clinical features. J Clin Endocrinol Metab. 2016;101(6):2300-2312, doi:10.1210/ic.2015-3909.

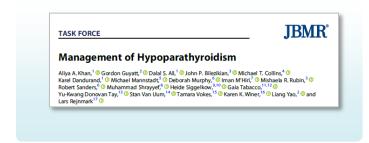
^{4.} Underbjerg L, Sikjaer T, Mosekilde L, et al. The epidemiology of nonsurgical hypoparathyroidism in Denmark: a nationwide case finding study. J Bone Miner Res. 2015;30(9):1738-1744. doi:10.1002/jbmr.2501.

⁵ Mannstadt M, Bilezikian JP, Thakker RV, et al. Hypoparathyroidism. Nat Rev Dis Primers. 2017;3:17055. doi:10.1038/nrdp.2017.55.

^{6.} Shoback DM, Bilezikian JP, Costa AG, et al. Presentation of hypoparathyroidism; etiologies and clinical features, J Clin Endocrinol Metab, 2016;101(6):2300-2312, doi:10.1210/ic.2015-3909.

Latest Clinical Practice Guideline

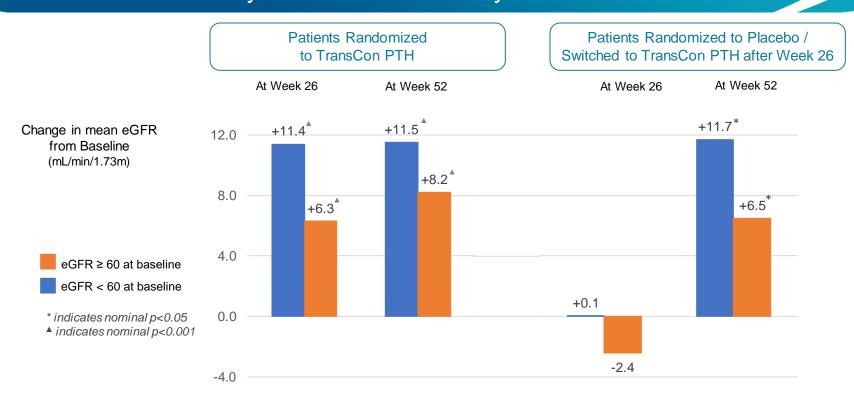
- Consider PTH replacement therapy in patients not adequately controlled on conventional therapy
- Inadequate control is considered to be any one of the following:
 - Symptomatic hypocalcemia
 - Hyperphosphatemia
 - Renal insufficiency
 - Hypercalciuria
 - Poor quality of life
- In addition, individuals with poor compliance, malabsorption, or who are intolerant of large doses of calcium and active vitamin D may also benefit from PTH replacement therapy





^{1.} Aliya A Khan et al, The Second International Workshop on the Evaluation and Management of Hypoparathyroidism, Journal of Bone and Mineral Research, 10.1002/jbmr.4671.

Significantly Improved Renal Function with TransCon PTH Treatment in Phase 3 PaTHway Trial Post Hoc Analysis



eGFR (an assessment of kidney filtering capacity) was calculated by the trial's central lab using the Modification of Diet in Renal Disease Study Group (MDRD) equation (Levey, Ann Intern Med 2006). Data on file.



Ascendis Commercial Organization - TransCon PTH Launch

- Europe Direct¹ Germany
 - ~70,000 adults² with chronic hypoparathyroidism in Germany
 - Launch of YORVIPATH planned in January 2024, initial list price³ of €105,000 per patient per year
- Europe Direct other selected countries
 - Over 100,000 additional adults with chronic hypoparathyroidism
 - Next major market expected end of 2024, expected availability across Europe by end of 2025
 - Providing commercial product through early access routes, such as 'named patient,' until commercial reimbursement established
- U.S.
 - Over 80,000⁴ adults with chronic hypoparathyroidism in the U.S.
 - PDUFA date May 14, 2024; expect to launch in Q3 2024, if approved
 - Experienced commercial team in place for rapid, efficient launch



¹ DACH, France & BeNeLux, Iberia, Italy, Nordics, UK & Ireland,

² German SHI claims data from the Institute for Applied Health Research Berlin (Institut für angewandte Gesundheitsforschung Berlin - InGef) research database.

³ Herstellerab gabepreis.

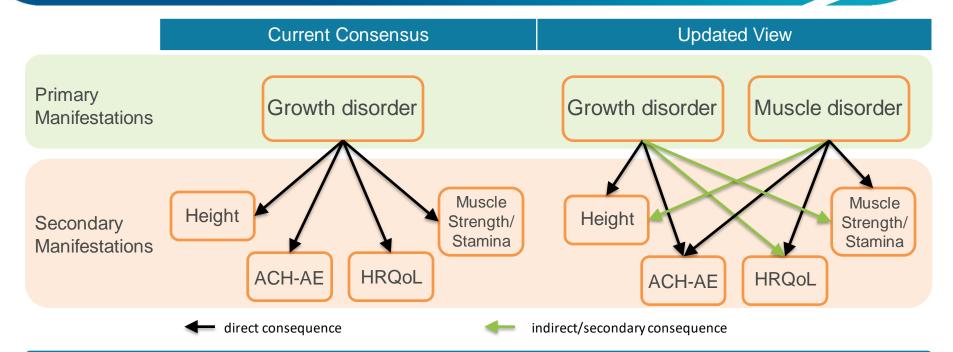
⁴ U.S. prevalence literature review and epi meta-analysis (Powers, Clarke, Milliman project, ipm.ai claims project; HCUPnet, Healthcare Cost and Utilization Project. Agency for Healthcare Research and Quality, Rockville, MD. for surgical cohort projection).

TransCon PTH Program Summary and Outlook

- Completed two successful Phase 3 trials: PaTHway and PaTHway Japan
- Post hoc analysis showed significantly improved renal function in TransCon PTH-treated patients
- Approved in European Union and other territories as YORVIPATH
 - German launch of YORVIPATH planned in January 2024
 - Rolling out to Europe Direct and International Markets starting in 2024
- In the U.S., PDUFA date of May 14, 2024
 - U.S. launch of YORVIPATH expected in Q3 2024, if approved
- Launching TransCon PTH through established, proven endocrinology rare disease infrastructure



Changing the Treatment Paradigm of Achondroplasia

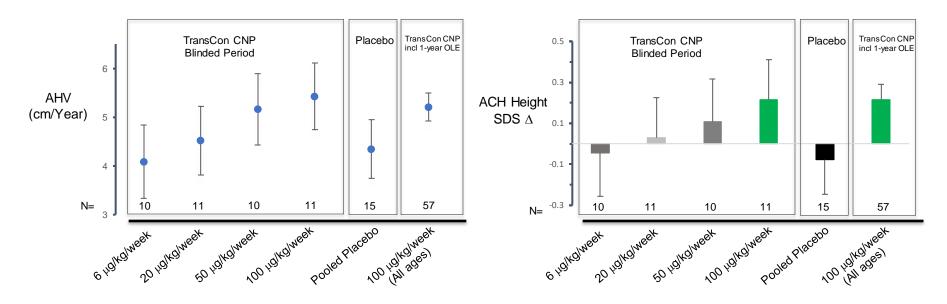


Address all aspects of achondroplasia for patients of all ages

ACH-AE; Increased incidence of Achondroplasia-related Adverse Events. HRQoL: Reduced Health-Related Quality of Life; Height; Reduced height. Muscle Strength/Stamina; Reduced muscular functionality, including reduced strength and stamina







Growth across full trial population (n=57) on TransCon CNP 100 µg/kg/week for 52 weeks consistent with results from randomized period

ANCOVA model. Data on file.

AHV: Annualized height velocity; ACH: achondroplasia; SDS: standard deviation score; OLE: open-label extension.

TransCon CNP is an investigational product candidate.



Health-Related Quality-of-Life Measures (HRQoL)

SF-10[™] Health Survey for Children

A 10-item non-disease specific survey of a child's functional health and well-being.1

Physical measures include assessments of:

- Limitations in activities, schoolwork
- Bodily pain or discomfort
- Overall health relative to other children
- Physical coordination or clumsiness

Lower scores indicate greater impairment.

Validated in children ages 5 yrs and older.

Achondroplasia Child Experience Measure

A condition-specific clinical outcome measure that assesses the impact of achondroplasia on a child's health-related quality of life.

Includes assessments of:2

- Daily Living Reach objects or high places. Toilet themselves. Bath, shower, wash. Perform fine motor skill tasks.
- Emotional Well-Being Feeling different, frustrated, etc.
- Physical Functioning Sit for long periods of time. Climb stairs. Be physically active. Walk long distances. Run.
- School Difficulty participating. Limited or modified gym class participation. Missed school.

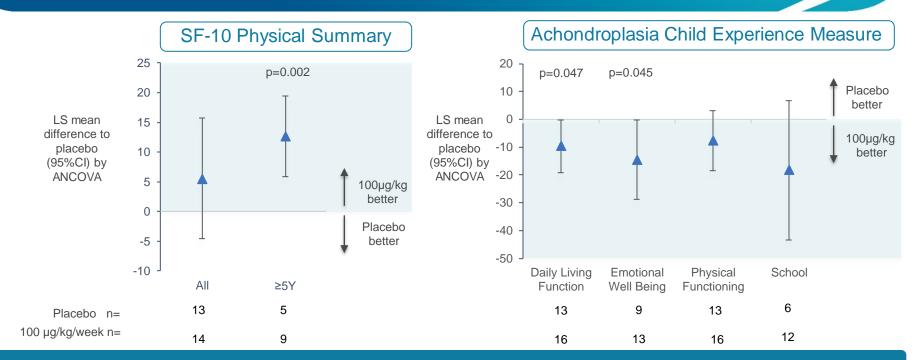
The measure is scored on a 0-100 scale, with higher scores indicating greater impairment.



^{1.} SF-10 Health Survey for Children™ | QualityMetric Accessed 28 December 2023.

² ACEM-Impact | Achondroplasia Child Experience Measure - Impact described in ePROVIDE (mapi-trust.org) Accessed 28 December 2023.

Consistent Positive Treatment Effect Across HRQoL Domains



Patients dosed with TransCon CNP demonstrated HRQoL improvements in multiple domains compared to placebo

All participants in blinded or OLE period of ACcomplisH who were initiated directly on 100µg/kg/week treatment (total n=19) compared to all participants from blinded period receiving placebo (n=15). All domains are missing some data points. Nominal p-values. Data on file.



TransCon hGH / CNP Combination Trial - COACH Trial

- Phase 2 open-label, single-arm trial (age 2-11 years), Clinical Trial Application (CTA) submitted
 - Primary objectives: evaluate treatment effect on linear growth and safety
 - Secondary objectives: evaluate treatment effect on quality of life, radiological endpoints, physical functioning, and body composition
- Clinical design
 - Cohort A: treatment naïve (n=12)
 - Cohort B: prior treatment with TransCon CNP (100 μg/kg/week) for at least 1 year (n=6)
 - Treatment with TransCon CNP (100 µg/kg/week) and TransCon hGH (0.30 mg/kg/week)
- Interim analysis at 26 Weeks, full analysis at 52 Weeks
 - Week 26 topline AHV data expected Q4 2024



TransCon CNP Program Summary and Outlook

- Pediatric patients:
 - Topline data from pivotal ApproaCH Trial expected Q4 2024
 - COACH Trial (hGH/CNP combination) Week 26 topline data expected Q4 2024
 - Plan to submit NDA to FDA in Q4 2024 for the treatment of achondroplasia
- Infant patients (age 0-2 years) CTA submitted:
 - 52-week randomized, double-blind, placebo-controlled trial
 - Primary endpoints: incidence of TEAEs and change in length/height Z-score
- Adult patients:
 - IND or similar for trial in adults with achondroplasia planned for Q4 2024

TransCon CNP treatment goal to improve linear growth, quality of life, radiological endpoints, physical functioning, and body composition





Global Commercial Presence Through Partners with Local Expertise and Infrastructure

Growing Commercial Presence – Rest of the World

China

- VISEN has exclusive license agreement for TransCon hGH, TransCon PTH, and TransCon CNP
- VISEN's TransCon hGH Phase 3 and TransCon CNP Phase 2 trials completed

Japan

- Teijin has exclusive license agreement for TransCon hGH, TransCon PTH, and TransCon CNP
- Phase 3 PaTHway Japan Trial completed
- International Markets for Endocrinology Rare Disease programs
 - Expanding global reach through exclusive distribution agreements with geographic market leaders
 - Three regional agreements established as of January 2024:
 - Specialised Therapeutics Asia Pte Ltd. (Australia, New Zealand, Singapore, Malaysia, Brunei, Thailand and Vietnam)
 - Er-Kim (Central & Eastern Europe and Turkey)
 - Vector Pharma FZCO (Saudi Arabia, United Arab Emirates, Kuwait, Oman, Qatar, and Bahrain)





Financial Update & 2024 Selected Milestones

Financial Update

Preliminary unaudited 2023 results

- SKYTROFA Q4 revenue of ~€64 million; full year 2023 SKYTROFA revenue of ~€179 million
- Full year 2023 total revenue of ~€267 million
 - Includes \$70 million Teijin upfront payment as non-product revenue in Q4
- December 31, 2023 cash, cash equivalents, and marketable securities of ~€400 million

Full Year 2024 outlook based on current plans

- Revenue
 - Expect SKYTROFA revenue of €320 to €340 million¹
 - Expect to provide YORVIPATH revenue update during 2024
- Operating expenses (SG&A and R&D) expected to be ~€600 million
- Operating cash flow: expect to be breakeven on quarterly basis by end of 2024



¹ Based on average 2023 exchange rates.

Selected Milestones Expected in 2024

Q1 2024 Q2 2024 Q3 2024 Q4 2024 **TransCon PTH** TransCon PTH **TransCon PTH TransCon CNP TransCon hGH Adults with Chronic Adults with Chronic Adults with Chronic Turner Syndrome** Hypoparathyroidism Hypoparathyroidism Hypoparathyroidism YORVIPATH launch in FDA decision U.S. commercial launch Germany **TransCon hGH Oncology TransCon CNP Adult GHD** Complete enrollment in Achondroplasia (age 2-11) Phase 2 HNSCC trial **Oncology** TransCon CNP / hGH Clinical update from Achondroplasia (age 2-11) indication-specific dose expansion cohorts **TransCon CNP** HNSCC: Head and neck squamous-cell carcinoma Achondroplasia (adults)



Introducing Vision 2030

Vision 2030

Achieve blockbuster status for multiple products and expand our engine for future innovation

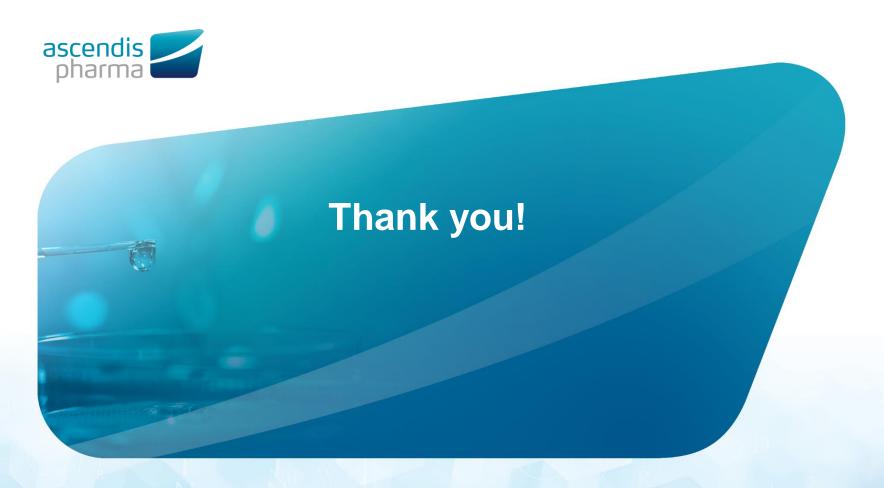
- Be the Leading Endocrinology Rare Disease Company
- Achieve blockbuster status (>\$1B) for TransCon PTH, TransCon hGH, and TransCon CNP through worldwide commercialization
- Be the leader in Growth Disorders and Hypoparathyroidism, pursuing clinical conditions, innovative LCM and complementary patient offerings
- Expand pipeline with Endocrinology Rare Disease blockbuster product opportunities
- Create Value in Additional Therapeutic Areas through Innovative Business Models
- Obtain accelerated approval in oncology with registrational trials ongoing
- Pursue TransCon product opportunities in >\$5B indications
- Maximize value creation of these product opportunities through collaboration with therapeutic area market leaders

Differentiate with Ascendis Fundamentals

- Outperform industry drug development benchmarks with Ascendis' product innovation algorithm
- Remain independent as a profitable biopharma through lean and flexible ways of working
- Let our values Patients, Science, Passion drive our decisions to success







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