Alnylam: Lessons Learned in Transitioning from Transformative R&D to WW launch

Theresa Heggie
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The Alnylam Epic Journey
Alnylam Journey is a Three-Act Play

Based on Nobel-Prize winning science, focused on rare genetic diseases, invested and investing in Europe

Extra copies of same gene = Cosuppression

1. Science

Alnylam was founded in 2002 with a vision to turn RNA interference (RNAi), a Nobel-Prize winning discovery, into a new class of medicines

2. Innovation

Among RNAi’s broad potential, Alnylam has made the deliberate, scientifically guided choice of focusing on diseases where the unmet medical need is high, primarily rare genetic diseases

3. Impact

Alnylam continues to invest in Europe and around the world through clinical research, job creation and partnerships with the health community to improve patients’ lives
Alnylam Today: the Leader in RNAi Therapeutics

~25 sites in 18 countries
• Includes: US, Switzerland, UK, France, Portugal, Spain, Germany, Austria, Italy, Benelux, Japan, Brazil, Canada
• >1200 employees

Global commercial company
• ONPATTRO for hATTR amyloidosis w/ polyneuropathy
• Approved in U.S., EU, Japan, Canada, Switzerland

Robust product portfolio
• Focus on 4 Strategic Therapeutic Areas (STArs)
  – Genetic Medicines, Cardio-Metabolic Disease, Hepatic Infectious Disease, and CNS/Ocular Disease
• 10 Programs in clinical development
  – 1 in Phase 4, 1 in Registration, 4 in Phase 3

Leaders in RNAi technology
• Design, synthesis, characterization, and delivery

Leading IP estate
• Robust fundamental, delivery and product-specific patent protection

Industry-leading partnerships and collaborations
• >12 major partnerships with Pharma/Biotech

Well-capitalized and strong balance sheet
• Raised ~$5.3B, invested ~$3B since inception
• ~$8B market cap; Q2’19 cash ~$2B

Vision:
Harnessing a revolution in biology for human health®

Mission:
Build a top-tier, independent biopharmaceutical company founded on RNAi
ALNY Value Since Inception

PPS / Market Cap / Enterprise Value / Investment

Price per share
Market Capitalization
Investment

Hope and Promise
Fear and Despair
Clinical Data
The first RNAi therapeutic is APPROVED IN U.S., EU, CANADA & JAPAN and SWITZERLAND.

- **onpattro** (patisiran) lipid complex injection 10 mg/5 mL
- **onpattro** 2 mg/mL concentrate for solution for infusion patisiran
- オンパットロ® パチシランナトリウム注射液2mg/mL

**Israel Filing**
MAA submitted June 2019

**Brazil Filing**
NDA submitted October 2019
Supporting ONPATTRO® Success Globally
Alnylam Commitment to Medical and Commercial Excellence
Alnylam: Building a Biotech Leader

Global commercial-stage biotech with emerging self-sustainability
• Address patient unmet needs around world
• Transitioning toward profitability over next 3-5 years

Deep clinical pipeline of transformative medicines to fuel robust growth
• Rich pipeline with large number of late-stage programs
• Essentially annual product launches for foreseeable future

Product engine to fuel organic and sustainable innovation for future
• Reproducible and modular approach for discovery
• Leadership in advancing a whole new class of medicines

Culture and team in place for long-term success
• Industry leadership and recognition
• Commitment to patients and excellence
Alnylam Clinical Development Pipeline

Focused in 4 Strategic Therapeutic Areas (STArs):
- Genetic Medicines
- Cardio-Metabolic Diseases
- Hepatic Infectious Diseases
- CNS/Ocular Diseases

<table>
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<tr>
<th>HUMAN POC¹</th>
<th>BREAKTHROUGH DESIGNATION</th>
<th>EARLY STAGE (IND or CTA Filed Phase 2)</th>
<th>LATE STAGE (Phase 2 - Phase 4)</th>
<th>REGISTRATION/COMMERCIAL³</th>
<th>COMMERCIAL RIGHTS</th>
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<td>Onpattro</td>
<td>hATTR Amyloidosis²</td>
<td>✔</td>
<td>●</td>
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<td>Givosiran</td>
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<td>ATTR Amyloidosis Label Expansion</td>
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<td>Fitusiran</td>
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<td>Complement-Mediated Diseases</td>
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<tr>
<td>Cemdisiran/Pozelimab Combo⁴</td>
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<td>ALN-HBV02 (VIR-2218)</td>
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<td>50-50 option rights post-Phase 2</td>
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<td>Hypertension</td>
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<td></td>
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</table>

- 3 STArs with Clinical Programs
- 1 Marketed Product
- 10 Clinical Programs
- 5 Late-Stage Programs
- 3 Breakthrough Designations
- Substantial Global Rights

¹ POC, proof of concept – defined as having demonstrated target gene knockdown and/or additional evidence of activity in clinical studies
² Approved in the U.S. and Canada for the polyneuropathy of hATTR amyloidosis in adults, in the EU for the treatment of hATTR amyloidosis in adults with stage 1 or stage 2 polyneuropathy, and in Japan for the treatment of transthyretin (TTR) type familial amyloidosis with polyneuropathy
³ Includes marketing application submissions
⁴ Cemdisiran is currently in Phase 2 development and pozelimab is currently in Phase 1 development; Alnylam and Regeneron are evaluating potential combinations of these two investigational therapeutics

As of September 2019
Reflections on our 16-year Journey

• Founded on and stayed committed to a BOLD Vision and Mission
• Committed to scientific and business EXCELLENCE in everything we’ve done
• Pioneered new frontiers of medicine advancing a WHOLE NEW DRUG CLASS
• Took major RISKS and conquered key technology HURDLES
• Clear partnership principles that bring COMPLIMENTARY CAPABILITIES
• GREAT people and “CHALLENGE ACCEPTED” culture were key success factors
• Pursued BREADTH of opportunity, but FOCUSED when needed
• Great at THINKING LONG-TERM; making decisions not just for today but how to grow from a product perspective and geographically
• Always kept PATIENTS front and center
To those who say “impossible, impractical, unrealistic,” we say:

CHALLENGE ACCEPTED