To develop innovative, RNA-based therapeutics to fill unmet medical needs for patients with genetic diseases
Corporate Highlights

- Focused on rare diseases, specifically addressing the unmet medical needs of neuromuscular diseases
- Lead compound in Phase III for Duchenne Muscular Dystrophy
- Encouraging efficacy data from long-term extension study; reported 48 weeks results at AAN 2011
- Key collaboration with GSK – Deal value up to EUR 460 million (USD 680 million) for selected part of DMD franchise
- Significant retained value through non-partnered assets in DMD
- RNA modulation platform, broadly applicable to rare and common diseases
- Proven management team & strong investor basis
## Financials

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2007</td>
<td>Series A</td>
<td>EUR 13.5M</td>
</tr>
<tr>
<td></td>
<td>Investors: Abingworth; LSP; MedSciences Capital</td>
<td></td>
</tr>
<tr>
<td>Dec 2008</td>
<td>Series B</td>
<td>EUR 18M</td>
</tr>
<tr>
<td></td>
<td>Investors: Abingworth; AGF; GIMV; LSP; MedSciences Capital</td>
<td></td>
</tr>
<tr>
<td>Oct 2009</td>
<td>Key Alliance with GSK</td>
<td>up to EUR 460M</td>
</tr>
<tr>
<td>Cash Balance Q2, 2011</td>
<td></td>
<td>EUR 25.8M</td>
</tr>
</tbody>
</table>
## Product Pipeline

<table>
<thead>
<tr>
<th>Indication</th>
<th>Compound</th>
<th>Discovery</th>
<th>Pre-clinical</th>
<th>Phase I/II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duchenne</td>
<td>PRO051</td>
<td></td>
<td></td>
<td>GSK 968</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO044</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO045</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO053</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO052</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO055</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRO000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myotonic Dystrophy</td>
<td>PRO135</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huntington’s Disease</td>
<td>PRO289</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Duchenne Muscular Dystrophy

- Rapid progression of muscle degeneration, due to the absence of dystrophin
- 75,000 patients in developed countries
- Big impact on patients and families / caregivers

Clinical symptoms DMD

- Rare, severely debilitating progressive disease
- Rapid progression of muscle degeneration, due to the absence of dystrophin
- 75,000 patients in developed countries
- Big impact on patients and families / caregivers

0  5  10  15  20  25  30

Age

walking problems
wheel chair - skeletal deformity
very limited use of arms
ventilation at night
ventilation 24
death

0  5  10  15  20  25  30

Age

walking problems
wheel chair - skeletal deformity
very limited use of arms
ventilation at night
ventilation 24
death
Duchenne Muscular Dystrophy

Cause: no dystrophin protein in muscles

Picture 1. Healthy control

Picture 2. Duchenne patient
The Dystrophin Gene

Exon skipping can restore the reading frame

Aartsma-Rus & van Deutekom, Antisense Elements (Genetics) Research Focus, 2007 Nova Science Publishers
**Systemic Study**

**Design**
- 12 patients / 4 sequential groups (3 patients each)
- 5 weekly s.c. injections, escalating dose (0.5-2.0-4.0-6.0 mg/kg)

**Endpoints**
- Plasma and tissue pharmacokinetic profile
- Safety parameters
- Muscle biopsies at two time-points: RNA and protein effects
- CK levels
- Muscle strength/performance

**Participating sites**
- Leuven, Belgium: Dr Nathalie Goemans
- Gothenburg, Sweden: Dr Mar Tulinius
Positive Systemic Study Results

- Stable dystrophin was detected in all treated samples
- Dose response was observed
- Subcutaneous administration was easy and effective
- Safe and well tolerated by all patients
- No neutralizing antibodies detected in any patients

*Revertant fiber*
Strategic Partnership with GSK

- Exclusive worldwide collaboration for the development and commercialization of RNA based therapeutics for DMD
  - Worldwide license to develop and commercialize PRO051
  - Three additional compounds under option (including exon 44)
- Prosensa retains commercial participatory rights
- Prosensa has an option to expand its commercial rights in certain European countries
- GBP 16m (USD 25m) upfront
- GBP 412m (USD 655m) in milestones
  - If all four compounds successfully developed
- Double-digit royalties on product sales
- Signed in October 2009
Endpoints

- Safety and tolerability
- Plasma and tissue pharmacokinetics
- Muscle biopsies: RNA and protein effects
- Muscle strength and function

Safety and efficacy assessment

- Weekly: AE, urinalysis
- Two-weekly: thrombocytes, urinalysis
- Monthly: safety blood and urine, PK, ECG, muscle strength and function
Extension Study Results

Six-Minute Walk Test in Long-term Extension Study at 6 mg/kg/week

After 12 weeks: mean increase of 35 (SD 29) meters
After 24 weeks: mean increase of 37 (SD 60) meters
After 48 weeks: mean increase of 29 (SD 80) meters

48-week follow-up data from a Phase I/IIa extension study was presented at AAN Annual Meeting in April 2011
Extension Study Results II

48-Weeks Extension Study at 6 mg/kg/week

- **PRO051 subjects**
- **N:15 DMD contemporaneous controls (all on steroids)**

*All control data captured up to November 2010.*
Extension Study Results III

**48-Weeks Extension Study at 6 mg/kg/week**

N = 10 (subjects who completed all 6-Minute Walk Test assessments). Subject 103 stopped test early and is not included in Figure; subject 201 was non-ambulant at baseline. SD, standard deviation.
### Individual Data After 48 Weeks at 6 mg/kg/week

<table>
<thead>
<tr>
<th>Subject</th>
<th>Deletion</th>
<th>Investigator comments at Week 48</th>
<th>Baseline extension</th>
<th>Week 12</th>
<th>Week 24</th>
<th>Week 48</th>
<th>Change Week 12</th>
<th>Change Week 24</th>
<th>Change Week 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>52</td>
<td>12 yrs, now able to jump and climb stairs</td>
<td>374</td>
<td>439</td>
<td>489</td>
<td>459</td>
<td>65</td>
<td>115</td>
<td>85</td>
</tr>
<tr>
<td>102</td>
<td>45–50</td>
<td>9 yrs, carried his sister round the room, rope skipping</td>
<td>406</td>
<td>475</td>
<td>468</td>
<td>485</td>
<td>69</td>
<td>62</td>
<td>79</td>
</tr>
<tr>
<td>103*</td>
<td>52</td>
<td>12 yrs, broke his leg</td>
<td>75</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>48–50</td>
<td>11 yrs, walked 12 km in hilly Ardennes, participated in tennis camp with peers</td>
<td>647</td>
<td>675</td>
<td>644</td>
<td>688</td>
<td>28</td>
<td>−3</td>
<td>41</td>
</tr>
<tr>
<td>105</td>
<td>45–50</td>
<td>10 yrs, improved walking distance and endurance</td>
<td>340</td>
<td>406</td>
<td>455</td>
<td>467</td>
<td>66</td>
<td>115</td>
<td>127</td>
</tr>
<tr>
<td>106</td>
<td>48–50</td>
<td>10 yrs, clear decline before extension</td>
<td>263</td>
<td>312</td>
<td>274</td>
<td>153</td>
<td>49</td>
<td>11</td>
<td>−110</td>
</tr>
<tr>
<td>107</td>
<td>48–50</td>
<td>12 yrs, in active decline prior to start of extension phase</td>
<td>243</td>
<td>237</td>
<td>184</td>
<td>146</td>
<td>−6</td>
<td>−59</td>
<td>−97</td>
</tr>
<tr>
<td>201</td>
<td>48–50</td>
<td>15 yrs, wheelchair, stable</td>
<td></td>
<td></td>
<td></td>
<td>Non-ambulant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202</td>
<td>48–50</td>
<td>9 yrs, plays land hockey and soccer, running after brother</td>
<td>429</td>
<td>450</td>
<td>473</td>
<td>523</td>
<td>21</td>
<td>44</td>
<td>94</td>
</tr>
<tr>
<td>205</td>
<td>45–50</td>
<td>13 yrs, in decline before study, now more stable</td>
<td>287</td>
<td>303</td>
<td>375</td>
<td>338</td>
<td>16</td>
<td>88</td>
<td>51</td>
</tr>
<tr>
<td>206</td>
<td>45–50</td>
<td>7 yrs, young boy improving in muscle function</td>
<td>350</td>
<td>400</td>
<td>380</td>
<td>381</td>
<td>50</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td>207</td>
<td>45–50</td>
<td>11 yrs, plays land hockey</td>
<td>500</td>
<td>494</td>
<td>465</td>
<td>485</td>
<td>−6</td>
<td>−35</td>
<td>−15</td>
</tr>
</tbody>
</table>

*Partial data only*
Safety and Tolerability Data

- Adverse events (AEs) in 12 subjects
  - Increase in α1-microglobulin: n=12
  - Proteinuria: n=11
  - Reversible on temporarily stopping treatment
  - Local injection site reactions: n=12
- 4 serious AEs; no treatment-related serious AEs
  - Seizure
  - Hospitalization for tooth extraction
  - Fracture of tibia
  - Scrotal (testicular) pain
- 3 subjects had treatment interruptions
  - Changes in renal markers; n=1
  - Reductions in thrombocyte counts; n=2
Conceptual representation of walking distance performance by DMD patients and healthy controls
Functional Outcome, Comparison

Six-Minute Walk Test for products with Regulatory Approval

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Name</th>
<th>Δ Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPS 1</td>
<td>Aldurazyme</td>
<td>Δ 38 meters*</td>
</tr>
<tr>
<td>MPS 2</td>
<td>Elaprase</td>
<td>Δ 30 meters*</td>
</tr>
<tr>
<td>Pompe</td>
<td>Myozyme</td>
<td>Δ 28 meters*</td>
</tr>
</tbody>
</table>

*Mean difference in 6-minute walk distance compared to control group
Local Dystrophin Restoration with Antisense Oligonucleotide PRO051

Systemic Administration of PRO051 in Duchenne’s Muscular Dystrophy

Nathalie M. Goemans, M.D., Mar Tulinius, M.D., Ph.D.,
Johanna T. van den Akker, Ph.D., Brigitte E. Burm, Ph.D., Peter F. Ekhart, M.Sc.,
Niki Heuvelmans, Tjadine Holling, Ph.D., Anneke A. Janson,
Gerard J. Platenburg, M.Sc., Jessica A. Sipkens, M.Sc., J.M. Ad Sitsen, M.D., Ph.D.,
Annemieke Aartsma-Rus, Ph.D., Gert-Jan B. van Ommen, Ph.D.,
Gunnar Buyse, M.D., Ph.D., Niklas Darin, M.D., Ph.D.,
Jan J. Verschuuren, M.D., Ph.D., Giles V. Campion, M.D.,
Sjef J. de Kimpe, Ph.D., and Judith C. van Deutekom, Ph.D.
Currently enrolling ambulant boys with Duchenne Muscular Dystrophy

Boys are screened for a dystrophin gene mutation amenable to an exon 51 skip

Around 13% of boys with DMD are eligible

First patient commenced treatment in January 2011

GSK is responsible for all of the Phase III costs
PRO051: Ongoing Clinical Studies

- **Study DMD114117 (regime optimization, EU, Australia, Turkey, Israel)**
  - Ambulant, double blind placebo-controlled, two dosing regimes vs placebo, 12 sites, 54 patients randomised
  - FPI August 2010
  - Results expected by H2-2012

- **Study DMD114118 (single dose PK, USA + France)**
  - Non-ambulant, single dose, dose-escalating tolerability and PK, 2 sites
  - FPI July 2010

- **Study DMD114044 (pivotal, global excl. USA)**
  - Double-blind, placebo-controlled, 6mg/kg vs placebo, 35 sites, 180 patients randomised
  - FPI December 2010
  - Key countries: France, Germany, Italy, Spain, Netherlands, Brazil, Russia, Japan, Chile, South Korea
For immediate release  
13 September 2011  

Prosenza Advances Three ExonSkipping Candidates for Duchenne Muscular Dystrophy into the Next Development Stage  

Prosenza to receive up to £27M in development and milestone payments from GSK  

Leiden, The Netherlands, 13 September 2011 – Prosenza, the Dutch biopharmaceutical company focusing on rare diseases with an unmet medical need, announced today that they have agreed with GlaxoSmithKline (GSK) to advance three further exon skipping compounds (PRO044, PRO045 and PRO053) into the next development stage under their ongoing collaboration relationship in Duchenne Muscular Dystrophy (DMD).
Prosensa’s Ambition

To create value with Prosensa

Discovery

Development

Commercialization

Development

Discovery

To grow Prosensa into a specialty biopharma company focused on rare diseases
DMD Opportunity

GSK rights: 22,000 pts

Prosensa retained: 38,000 pts

Eligible for exon-skipping: 60,000 pts

Duchenne population (developed countries): 75,000 pts

Significant product sales opportunity for retained rights

Milestones + royalties

GSK

Prosensa
Intellectual Property

- FTO analysis performed in DMD
- Fully enabled to commercialize exon-skipping DMD drugs
- Good level of IP protection in both Europe and US:
  - Issued claims in Europe (DMD exon claims) and US
  - Pending claims in both Europe and US
- Broad set of patent families covering pipeline products and discovery projects
- Active in-licensing strategy through strong academic network

Orphan Drug Designations granted in Europe and the US
News Flow 2011-2012

- Announcement follow-on DMD compounds (Q3-2011)
- 96-wk results PRO051/GSK2402968 extension study (Q4-2011)
- First Prosensa retained DMD compound enters clinic (exp H1-2012)
- Follow-on exons candidate selection (exp H1-2012)
- Results first placebo-controlled study (exp H2-2012)
Leadership

- Management Board
  - **CEO** - Hans Schikan
  - **CFO** - Berndt Modig
  - **CMO** - Giles Campion
  - **CBO** - Luc Dochez

- Supervisory Board
  - Daan Ellens (Chair)
  - Stephen Bunting (Abingworth)
  - Rémi Droller (AGF-Kurma)
  - Peter Goodfellow
  - Jim Van Heusden (Gimv)
  - Martijn Kleijwegt (LSP)
Venture Capital

Other Partners

Abingworth
LSP
Gimv
AGF
MedSciences Capital

Cure Duchenne
AFM
Parent Project Muscular Dystrophy
SenterNovem
ZonMw

SPINAL MUSCULAR ATROPHY FOUNDATION

Agentchap voor duurzaamheid en innovatie
Corporate Highlights

- Focused on rare diseases, specifically addressing the unmet medical needs of neuromuscular diseases
- Lead compound in Duchenne Muscular Dystrophy in Phase III
- Encouraging efficacy data from long-term extension study
- Key collaboration with GSK – Deal value up to EUR 460 million (USD 680 million) for selected part of DMD franchise
- Significant retained value through non-partnered assets in DMD
- RNA modulation platform, broadly applicable to rare and common diseases
- Proven management team & strong investor basis
RNA modulation to fight Duchenne Muscular Dystrophy

"Why are my muscles not so strong? I really hope they find something soon!"