NEXT GENERATION DRUGS FOR NEURODEGENERATIVE DISEASES
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Key Takeaways

1. Late stage biotech specialized in neurodegenerative diseases

2. Pleotherapy: a proprietary and disruptive R&D model to develop drug combinations in new indications

3. 5 key advantages: efficacy, safety, speed, affordability and strong IP

4. First-in-class lead product with Orphan Status currently in Phase 3, with high probability of success and blockbuster potential for Charcot-Marie-Tooth de Type 1A

5. Major upside potential with a broad and diversified pipeline: additional orphan and common indications including Alzheimer’s, Parkinson’s diseases and ALS

6. An unrivalled team strongly supported by a stellar Scientific Advisory Board and 37 FTEs
Plan

1. Team
2. Technology
3. Charcot Marie Tooth Disease
4. Alzheimer’s Disease
5. Growth Strategy and Newsflow
6. Governance and Financials
7. Terms of the IPO
1. An Unrivalled Team to Lead a New Biotech

- **Catherine Chalandon**
  VP Operations & Strategy
  - Former manager at Bionest
  - 15 years experience in biotech sector in financial and valuation analysis but also in strategic and organizational consulting
  - Previously in Life Sciences team at Robertson Stephens and BoA
  - Graduate of HEC Paris Business School

- **Pierre Schwich**
  Chief Financial Officer
  - Former CFO at Cellectis
  - Former Investment Director at 3i, Corporate secretary at Siparex
  - 20+ years experience as CFO and General Counsel in listed or private fast growing tech companies
  - Graduate of Mines ParisTech, Engineering school

- **Niall Murphy, PhD**
  Chief Scientific Officer
  - Co-principal Investigator at UCLA (Los Angeles) and former unit leader at RIKEN Brain Science Institute, Japan
  - PhD in neuroendocrinology, specialist in neurological and psychobiological disorders with 20+ years experience in preclinical research
  - Co-author of over 55 research articles and reviews, peer reviewer for 30+ international journals

- **Xavier Paoli**
  Director of Commercialization Strategy
  - Former manager in biopharmaceutical and big pharma companies such as GSK, UCB and Alexion
  - 15 years experience in pharma/biotech marketing strategy and operations with a focus on rare diseases
  - Graduate of HEC Paris with a Master of Marketing and of University Denis Diderot in Paris with a Master of Science in Genetics and Immunology

- **Prof. Daniel Cohen, MD, PhD**
  CEO & Founder
  - Former CSO of Genset (acquired by Serono) and VP Genetics Worldwide of Serono Genetics Institute
  - 30+ years experience in academia, biotech and pharma
  - Professor of Medical Genetics and pioneer of modern genetics
  - Co-founder of Millennium Pharma, Genethon and the CEPH research institute
  - Author of 150 peer-reviewed publications

- **Niall Murphy, PhD**
  Chief Scientific Officer
  - Co-principal Investigator at UCLA (Los Angeles) and former unit leader at RIKEN Brain Science Institute, Japan
  - PhD in neuroendocrinology, specialist in neurological and psychobiological disorders with 20+ years experience in preclinical research
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1. A Leading Scientific Advisory Board Supporting a Unique Approach

**Ilya Chumakov, PhD, D-Sc**  
*Chairman, Co-founder*
- Pioneer in genetics, genomics and molecular pharmacology
- Former director at CEPH, Genset and Serono Genetics Institute
- Inventor of more than 60 patents

**Prof. David Comblath MD**
- Expert in peripheral nerve disorders
- Professor of Neurology and Neurosurgery at The Johns Hopkins University in Baltimore (US)
- Chief editor of Journal of the Peripheral Nervous System and of Journal of the Peripheral Nerve

**Prof. Wally Gilbert PhD**
- **Nobel Prize in Chemistry 1980**
- 29+ years entrepreneur experience in successful biotechnology (co-founder/CEO of Biogen-Idec), Myriad Genetics, Paratek Pharma and Memory Pharma

**Prof. Jean-Marie Lehn PhD**
- **Nobel Prize in Chemistry 1987**
- Innovator in supramolecular chemistry
- Member of the scientific sponsoring committee of French Association for Scientific Information (AFIS)

**Prof. Richard Lewis MD**
- Expert in inflammatory and hereditary neurological diseases, discoverer of the Lewis-Summer syndrome
- Professor of Neurology and Director of the Electromyography Laboratory at the Cedars-Sinai hospital, Los Angeles (US)

**Prof. Michael Sereda MD, PhD**
- Expert in hereditary neuropathies, creator of the PMP22 transgenic rat model
- Group leader Molecular and Translational Neurology, Max Planck Institute of Experimental Medicine (Germany)

**Prof. Eric R. Kandel MD, PhD**
- **Nobel Prize in Medicine 2000**
- World expert in neuroscience and Professor of biochemistry and biophysics at Columbia University, New York (US)

**Prof. Anthony Schapira MD**
- Expert in Parkinson’s disease
- Head of Department of Clinical Neurosciences, UCL Institute of Neurology, London (UK)
- Professor of Neurology and Consultant Neurologist at the National Hospital for Neurology and Neurosurgery and the Royal Free Hospital, London (UK)
Plan

1. Team

2. Technology

3. Charcot Marie Tooth Disease

4. Alzheimer’s Disease

5. Growth Strategy and Newsflow

6. Governance and Financials

7. Terms of the IPO
2. Today’s Pharma facing Significant Challenges: Safety and Price

**SAFETY**

**SCIENCE**

Biotrial: de nouvelles failles béantes dans l’essai clinique mortel de Rennes

« Le Figaro » révèle que les survivants ont souffert

**NEWS**

Cancer drug Zydelig: Clinical trial deaths prompt safety warning from Australian authorities

By medical reporter Sophie Scott and Rebecca Armitage

Updated 16 Mar 2016, 11:48pm

A drug treating acute myeloid leukemia, which has been linked to deaths, is being withdrawn from trials in Australia.

Zafgen shares plummet after death of 2d patient

In a statement, chief executive Thomas Hughes said Zafgen is discussing its next steps with the Food and Drug Administration.

**PRICE**

L’urgence de maîtriser les prix des nouveaux médicaments contre le cancer


Personalized Medicine: Worth Its Cost?

Price M. Canclini

La question de l’efficacité et de la rentabilité de la médecine personnalisée est de plus en plus discutée. Les coûts importants de la recherche et de la fabrication de médicaments spécifiques pour chaque patient sont en effet un défi important.

Clinton calls drug price hike ‘outrageous,’ vows plan

Aléxis Sten Tollefson

Health care costs have risen sharply in recent years, and Clinton’s plan aims to address this issue by reducing the price of prescription drugs.
# 2. New Focus on Diseases with No Treatment

## Classical Approach

### Monotherapy
- Monomolecule

- Composition of matter on a new molecule
- Lower than combinations
- Difficult to predict
- 15 years / high attrition rate
- High / challenged

## Pharnext Approach

### Pleotherapy
- Synergistic combination of repositioned drugs at low dose

- Composition of matter on new combinations of off-patents drugs
- More responders and higher response per responder
- Likely higher (already approved drugs at low dose)
- 10 years / low attrition rate because of higher safety & efficacy
- Lower / affordable

### Chart
- **IP**
- **Efficacy**
- **Safety**
- **Development Time**
- **Target Price**

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**Mono Target**

**Multi Target**
2. A New Way of Combining and Repositioning Drugs

**Drug combinations have generated major medical breakthroughs in the past**

- Tri-therapy for **AIDS**
- Tri-therapy for **Hypertension**
- Chemotherapy cocktails in **Cancer**

**Several drugs were successfully repositioned but mostly based on serendipity**

- **Aspirin**: against Fever and Pain but also an anticoagulant
- **Viagra**: first developed for Heart Diseases
- **Thalidomide**: first identified for psychiatry, now used in Cancer

**Pharnext platform**

- Applicable to any indication
- Systematizing repositioning
- Combining drugs in indications without any available treatment
2. Pleotherapy: Surfing on Complexity

... the living world is not different
2. Pharnext Expertise: Build Map of Disease Network and Identify the Best Combinations to Treat the Disease

Monotherapy

One drug at high dose for one therapeutic target

Pleotherapy

Synergistic low-dose combination of drugs for multiple therapeutic targets

Pleotherapy: Creating a Broad and Safe Action through Synergistic Effects
2. Pleotherapy: A New Approach for Drug Development

1. Discovering the complex molecular network of a disease => inventory of all possible therapeutic targets

2. Screening and repositioning approved drugs at low-dose in order to identify synergistic combinations

- >2,000 available drugs
- 50 candidate drugs
- 25 positive drugs
- 4 synergistic combos
- 1 PLEODRUG

Addressing multiple therapeutic targets at low dose to enhance efficacy and obtain better safety
2. Pleotherapy: A Faster R&D Process

**Classical Model:** A long and expensive process lasting 15 years with high attrition rates

<table>
<thead>
<tr>
<th>Research Phase</th>
<th>Development Phase</th>
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<tbody>
<tr>
<td>6 years</td>
<td>9 years</td>
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</tbody>
</table>

**Pharnext Model:** A faster development of effective and safe drugs at reduced cost lasting 10 years

<table>
<thead>
<tr>
<th>Research Phase</th>
<th>Development Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 years</td>
<td>7 years</td>
</tr>
</tbody>
</table>

**Pharnext Model:**
- **No Phase 1 required**
- **Gain of 5 years for a less risky entry in Phase 2**
2. Interview of a member of the Scientific Advisory Board, Nobel Prize
2. Pleotherapy: High Potential Value Creation in Charcot Marie Tooth Type 1A and Alzheimer’s Disease

<table>
<thead>
<tr>
<th>Product</th>
<th>Discovery</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2a</th>
<th>Phase 2b</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXT3003</td>
<td>CMT1A Adults</td>
<td>(no phase 1 required)(^a)</td>
<td></td>
<td></td>
<td></td>
<td>Ongoing Results expected in H2 2018</td>
</tr>
<tr>
<td></td>
<td>CMT1A Children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other peripheral neuropathies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PXT864</td>
<td>Alzheimer’s Disease</td>
<td>Results of Phase 2a expected in H2 2016</td>
<td>Launch of Phase 2a/b in H2 2017 - Results expected in 2019/2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parkinson’s Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amyotrophic Lateral Sclerosis(^b)</td>
<td></td>
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</tr>
</tbody>
</table>

Note (a): The CMT program went through phase 2 directly after the preclinical results. Phase 1 was not required by French health authorities (ANSM)
Note (b): Amyotrophic Lateral Sclerosis is also called Charcot Disease
2. Pleotherapy: High Potential Opportunities in True Medical Needs

26 disease networks already mapped, many of which await therapeutic targeting

- CMT
- MULTIPLE SCLEROSIS
- ASTHMA
- PSORIASIS
- DIABETIC NEUROPATHIES
- DOWN’S SYNDROME
- CANCER(2)
- RHEUMATOID ARTHRITIS
- TOXIC NEUROPATHIES
- AXONAL GROWTH
- CORONARY DISEASE
- SLE(3)
- NEUREGULIN SIGNALING
- MYOPATHIES
- CROHN’S DISEASE
- TYPE 2 DIABETES
- ALZHEIMER’S DISEASE
- SCHIZOPHRENIA
- HIGH BLOOD FATS
- ULCERATIVE COLITIS
- PARKINSON’S DISEASE
- STROKE
- HYPERTENSION
- PXT3003
- ALS(1)
- MEMORY
- POLYCYSTIC KIDNEY
- PXT864

Preclinical pipeline

Note 1: ALS = Amyotrophic Lateral Sclerosis
Note 2: Includes glioma, hepatoma, melanoma, lung cancer, prostate cancer
Note 3: SLE = Systemic Lupus Erythematosus

Development of a high-value portfolio applicable to a broad spectrum of diseases
Plan

1. Team
2. Technology
3. Charcot Marie Tooth Disease
4. Alzheimer’s Disease
5. Growth Strategy and Newsflow
6. Governance and Financials
7. Terms of the IPO
3. Lead Product for Charcot Marie Tooth Disease Type 1A

- **Characteristics / symptoms**
  - Chronic, severe, debilitating inherited neuropathy with muscle atrophy in extremities: walking and hand disabilities up to handicap

- **Population**
  - Approx. 100,000 people affected with mild to moderate CMT1A in US and EU5

- **Treatment**
  - No drug approved or in clinical development, only supportive care

- **Barriers to entry**
  - In addition to robust IP, orphan drug status in US and EU5 provides market exclusivity

- **Outcome**
  - In most patients, disease is stabilized while a fair proportion is even improved

- **Expected Peak Sales**
  - Approx. > $1 billion (US + EU5)
3. CMT 1A: Targeting the Cause of the Disease with PXT3003

**Disease at a glance**

Schwann cells constitute myelin which isolates and nurtures axons

CMT 1A is due to overexpression of PMP22 protein in Schwann cells that are impaired

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**Network analysis**

The CMT network

1. **Opioid receptor**
   - Lowers expression of PMP22 gene
2. **GABA receptor**
   - Improves myelination
3. **Muscarinic receptor**
   - Preserves axons
4. **Baclofen**
   - Improves motor function

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**Design of Pleodrug**

Design of PXT3003

- **Naltrexone** - Opioid receptor
- **Baclofen** - GABA receptor
- **Sorbitol** - Muscarinic receptor

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Cell Body
Basement membrane
Myelin Sheath
Axon
Muscle

Normal
Suffering
Death

Schwann cell

**Myelin Impairment**

Myelin Sheath

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Strictly confidential
3. CMT 1A: PXT3003 Synergistic Effect

PXT3003 synergistic combination at low-dose significantly reduces PMP22 gene expression

![Bar chart showing relative PMP22 to Mpz mRNA expression levels](chart.png)

- **Véhicule**
- Baclofène 100 nM
- Naltrexone 100 nM
- Sorbitol 10 µM
- PXT3003
**PXT3003** improves various models of peripheral neuropathies

### CMT1A Rat Model

- **Non-clinical endpoints**
  - PMP22 expression
  - Compound muscle action potential
  - Motor nerve conduction velocity
  - Number of total myelinated axons
  - Grip strength
  - Bar test
  - Inclined plane
  - Hot plate

### Clinical endpoints

<table>
<thead>
<tr>
<th>% Improvement</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
</tr>
</thead>
</table>

### Mouse Sciatic Nerve Crush Model

<table>
<thead>
<tr>
<th>% recovery of surface bearing paws</th>
<th>Normal (placebo)</th>
<th>BCL</th>
<th>NTX</th>
<th>SRB</th>
<th>PXT-3003</th>
</tr>
</thead>
</table>

**CMAP**: Compound Muscle Action Potential  
**MNCV**: Motor Nerve Conduction Velocity
3. CMT 1A: Phase 2 Design

CMT 1A: Phase 2 Trial of PXT3003

**Assessment**
- Safety and tolerability
- Efficacy
- 11 endpoints including Overall Neuropathy Limitation Scale (ONLS)*
- No Phase 1 needed
- PXT3003: Naltrexone + Baclofen + Sorbitol

**Design**
- Phase 2a trial
- 12-month treatment
- 6 reference centers in France
- Placebo-controlled, randomized and double blind
- Oral liquid formulation given twice daily

**Dosing**
- Same fixed ratio of 3 different doses ranging from 1/1,000 to 1/20 of approved drugs

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*Note*: ONLS is a scale for doctor investigation assessing disability
3. CMT 1A: Promising and Significant Efficacy Results

**Global Analysis (Z-SCORE)**

**P High Dose vs Placebo = 0.007**

**P Dose Effect = 0.003**

![Graph showing Z-score improvement across visits and dose groups.](chart.png)

Note*: Z-score summing all objective measures – clinical measures (CMTES, ONLS, PEG Test, walk test, QMT) and electrophysiology variables.

**Main efficacy criteria (ONLS)**

- **18.6% Improvement of disability**
  
  (p = 0.04)

- **PXT3003 High Dose vs Placebo = 0.007**

- **P Dose Effect = 0.003**

![Graph showing ONLS improvement across dose groups.](chart.png)

Source: Pharnext publication: Orphanet J Rare Dis 9:201

PXT3003 shows an improvement beyond stabilization versus baseline and an improvement versus placebo (p=0.007) with dose effect (p = 0.003)

PXT3003 also shows an improvement on ONLS, which was recommended by FDA/EMA as the primary endpoint of the Phase 3

The ONLS improvement seen in Phase 2 is sufficient for approval if reproduced in Phase 3
3. CMT 1A: Highly Recognized by Peers

CMT 1A Phase 2 results: one of the most influential scientific publications in 2015

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**Orphanet Journal of Rare Diseases**

Dear Colleague,

We would like to share with you our most influential articles of 2015, according to Altmetric.com.

**Influential Articles of 2015**

- [Ketogenic diet in a patient with congenital hyperinsulinism: a novel approach to prevent brain damage](#)
- [Review of Dercum’s disease and proposal of diagnostic criteria, diagnostic methods, classification and management](#)
- [An exploratory randomised double-blind and placebo-controlled phase 2 study of a combination of baclofen, naltrexone and sorbitol (PXT3003) in patients with Charcot-Marie-Tooth disease type 1A](#)
- [Rare diseases and orphan drugs: 500 years ago](#)
- [The quality of economic evaluations of ultra-orphan drugs in Europe – a systematic review](#)
- [The European Union Committee of Experts on Rare Diseases: three productive years at the service of the rare disease community](#)
- [Australian families living with rare disease: experiences of diagnosis, health services use and needs for psychosocial support](#)
- [The involvement of patient organisations in rare disease research: a mixed methods study in Australia](#)

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Confirmation of the strong interest in PXT3003 from the scientific community
3. Interviews of Neurologists

Richard Lewis, MD PhD
Cedars-Sinai Specialty Clinic, Los Angeles, USA

David R. Cornblath MD PhD
The Johns Hopkins University, Baltimore, USA

Michael Sereda, MD PhD
Max Planck Institute of Experimental Medicine, Gottingen, Germany
3. CMT 1A: Phase 3 Underway with over 75 patients enrolled

Endpoints defined with FDA & EMA

- Primary endpoint: ONLS
- Secondary endpoints: clinical, functional, electrophysiological and quality of life

Pivotal Phase 3 Design

- Pivotal, randomized, double blind, placebo-controlled, three arms
- International study in 28 centers across the US and EU
- 15-month double blind + 9-month extension study
- 1st patient recruited Q4 2015, last Q4 2016
- Adaptive design analysis at 80 patients completed in Q3 2017
- Futility analysis at 100 patients completed in Q3 2017
- Results expected end 2018
- Formulation: oral liquid solution given twice a day

300 mild-to-moderate patients (age >16) with CMT1A and PMP22 gene duplication

- Phase 2 high dose n=100
- 2 x Phase 2 high dose n=100
- Placebo n=100

First FDA exemption from single drug testing in man in a combination therapy

We remain open to the possibility that a well-designed factorial trial of PXT3003 in the PMP22Tg transgenic rat model could potentially fulfill the Agency's combination drug policy under 21 CFR 300.50(a).
Plan

1. Team
2. Technology
3. Charcot Marie Tooth Disease
4. Alzheimer’s Disease
5. Growth Strategy and Newsflow
6. Governance and Financials
7. Terms of the IPO
4. Second Product Targeting Proof of Concept in Alzheimer’s Disease

- **Characteristics / symptoms**
  - Irreversible, progressive neurodegeneration leading to a state of dementia
  - 1 in 8 people over 65 suffer from Alzheimer
  - ~100 million cases expected by 2050 unless effective treatments discovered
  - Seventh leading cause of death in USA

- **Population**
  - Poorly efficient on symptoms with frequent side and tolerability issues

- **Treatment**
  - IP including composition of matter patents for PXT864

- **Barriers to entry**
  - Any better symptomatic relief or disease-modifying effects would be a success

- **Market**
  - Industrial partnership post Phase 2
  - An efficient treatment could be a $5-$20 billion market opportunity
  - Significant co-prescription opportunities with potentially competitive treatments
Network analysis implicates glutamate/GABA imbalance in Alzheimer’s disease.

Design of PXT864:
- Baclofen (GABA receptor)
- Acamprosate (Glutamate receptor)

Breaking the vicious circle:
- Increased Aβ toxicity and level
- Disrupted Excitatory-Inhibitory balance

Targeting to restore the Excitatory-Inhibitory balance that is disrupted in Alzheimer’s Disease.
4. Alzheimer: Poly-efficacy of PXT864 Preclinical

Pharnext Pleodrug PXT864

- Protects neurons against Aβ toxicity
- Preserves synaptic integrity
- Protects vessels against Aβ toxicity
- Decreases inflammation
- Synergistic with standard of care
- Alleviates cognitive deficits in Alzheimer animals
- Reduces Aβ levels

Broad action with PXT864
4. PXT864: Complete Phase 2A Trial for Alzheimer

**Design**
- Phase 2a trial completed end 2015
- 45 patients with mild Alzheimer’s Disease
- 5 French memory centers
- Single-blind crossover study
- 12-week duration
- 6-month follow-up for safety
- 3 doses tested
- Formulation: pill given twice daily

**Outcome**
- Significant improvement in cognitive function measured by ADAS-cog during active treatment

![Graph showing improvement in ADAS-Cog in PLEODIAL I & II](image)

**Highly promising preliminary results in first Phase 2**
4. PXT864: High Potential in Other Major Indications

Potential in other neurodegenerative diseases

- Networks suggest similar imbalance in Parkinson’s and ALS
- Publication of Preclinical Results in Parkinson’s in Nature Scientific Reports (2015)
- PXT864 could be developed in Parkinson’s disease and Amyotrophic Lateral Sclerosis (ALS)

Anthony Schapira
Head of the Department of Clinical Neuroscience at the UCL Institute of Neurology (London)

“The data presented provide compelling evidence of PXT864’s potential in the treatment of Parkinson’s disease.”
Plan

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7. Terms of the IPO
5. A Clear-Cut Strategy to Create Value with Next Generation Drugs for Unmet Needs in Neurodegenerative Diseases

For orphan diseases
- In-house development given affordable development cost in these diseases
- Opportunistically enter into partnership

Example with CMT 1A: Pursuing PXT3003
Pivotal Phase 3 Started Q4 2015
Develop new targets in rare diseases

For common diseases
- Seek partnership after proof of concept in man (Phase 2a or Phase 2b)

Example with Alzheimer: Starting PXT864
New Dose-Finding Phase 2
Develop new targets in common diseases

Multiply proofs of concept and maximize value creation
5. Newsflow

**PXT3003 in CMT1A**

- **Q1:** Orphan drug status granted in EU and in the US
- **Q4:** Preclinical and Ph 2 data published in OJRD
- **Q1:** Completion of EMA protocol assistance on Ph 3 design
- **Q3:** Ph 3 IND granted by FDA
- **Q4:** 1st patient enrolled in Ph 3 trial
- **Q4:** Last patient enrolled in Ph 3 trial
- **H2:** Adaptive design analysis on 80 patients completed and futility analysis on 100 patients completed
- **H2:** Final results of Ph 3 trial
- **Submission of Marketing Authorization Assessment dossier (FDA + EMA)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2014</td>
<td><strong>Q2:</strong> Phase 1b – EU Scientific Advise Procedure with the French, Swedish and Portuguese national agencies</td>
</tr>
<tr>
<td>2015</td>
<td><strong>Q1:</strong> Publication of preclinical results in Nature Scientific Reports</td>
</tr>
<tr>
<td>2016</td>
<td><strong>H2:</strong> Final results of Phase 2a trial (3 doses tested and 6 months follow up)</td>
</tr>
<tr>
<td>2017</td>
<td><strong>H2:</strong> Initiation of Phase 2a/b trial – dosing and synergy studies (PXT864 + donepezil in 200 patients)</td>
</tr>
<tr>
<td>2018</td>
<td><strong>H2:</strong> Initiation of PXT864 new formulation study</td>
</tr>
<tr>
<td>2019</td>
<td><strong>Final results of Phase 2a/b trial on dosing and synergy with donepezil</strong></td>
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**PXT864 in ALZHEIMER’S DISEASE**
Plan

1. Team
2. Technology
3. Charcot-Marie-Tooth Disease
4. Alzheimer’s Disease
5. Growth Strategy and Newsflow
6. Governance and Financials
7. Terms of the IPO
6. A Highly Experienced Board of Directors

**Michel de Rosen**
*Chairman of the Board*
- Former CEO and current chairman of Eutelstat
- 20+ years experience in biotech and pharma including 15 years in the US. Former CEO of ViroPharma

**Prof. Daniel Cohen MD, PhD**
*CEO & Board Member*
- 30+ years experience in academia, biotech and pharma
- Co-founder of Millennium Pharma, Genethon and the CEPH research institute

**Jacques Attali**
*Board Member*
- Economist
- Founder of 4 international institutions, including BERD and Positive Planet (support to micro-finance)

**Pierre Bastid**
*Board Member*
- Former CEO of Converteam
- International entrepreneur and investor in several biotechs including Cellectis (Board Member) and Carmat

**Christian Pierret**
*Board Member*
- Former Minister of Industry in France from 1997 to 2002
- Partner at August & Debouzy and Board Member of Abivax and Deinove

**Philippe Pouletty, MD**
*Representing Truffle Capital SAS*
- Co-founder and General Partner of Truffle Capital, a leading European private equity firm specialized in biotechnology
- Founder/co-founder of several biotechs including Sangstat and Conjuchem

**Nabil Sakkab**
*Representing Sakkab LLC*
- Former SVP of R&D of Global Fabric and Home Care at Procter & Gamble
6. Financials: Income Statement (IFRS)

A cost structure aligned with strategy: **R&D represents 68% of operating costs, Salaries & Benefits: 37%**

<table>
<thead>
<tr>
<th></th>
<th>31/12/2015</th>
<th>31/12/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other revenues</strong></td>
<td>2,631</td>
<td>2,757</td>
</tr>
<tr>
<td><strong>R&amp;D expenses</strong></td>
<td>(7,649)</td>
<td>(6,717)</td>
</tr>
<tr>
<td><strong>G&amp;A expenses</strong></td>
<td>(3,613)</td>
<td>(3,860)</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>(8,631)</td>
<td>(7,821)</td>
</tr>
<tr>
<td><strong>Financial income</strong></td>
<td>64</td>
<td>87</td>
</tr>
<tr>
<td><strong>Financial expenses</strong></td>
<td>(2,428)</td>
<td>(2,998)</td>
</tr>
<tr>
<td><strong>Net Financial Income</strong></td>
<td>(2,364)</td>
<td>(2,911)</td>
</tr>
<tr>
<td><strong>Earnings before tax</strong></td>
<td>(10,994)</td>
<td>(10,731)</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>(10,994)</td>
<td>(10,731)</td>
</tr>
</tbody>
</table>

Mainly:
- Research Tax Credit
- Interest on convertible bonds (converted into shares at the IPO)
### 6. Financials: Balance Sheet (IFRS)

R&D and IP costs are not capitalized

<table>
<thead>
<tr>
<th>In K€</th>
<th>31/12/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangible assets</td>
<td>58</td>
</tr>
<tr>
<td>Tangible assets</td>
<td>34</td>
</tr>
<tr>
<td>Other assets</td>
<td>51</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td><strong>143</strong></td>
</tr>
<tr>
<td>Receivables</td>
<td>3,004</td>
</tr>
<tr>
<td>Other Financial assets</td>
<td>0</td>
</tr>
<tr>
<td>Cash and cash equivalent</td>
<td>3,089</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td><strong>6,092</strong></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>6,235</strong></td>
</tr>
<tr>
<td>Equity</td>
<td>64</td>
</tr>
<tr>
<td>Share issue premium</td>
<td>34,443</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>(47,201)</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>(10,994)</td>
</tr>
<tr>
<td><strong>Shareholders’ equity</strong></td>
<td><strong>(23,698)</strong></td>
</tr>
<tr>
<td>Debt and borrowings</td>
<td>10,121</td>
</tr>
<tr>
<td>Employees’ benefits</td>
<td>287</td>
</tr>
<tr>
<td>Provisions</td>
<td>180</td>
</tr>
<tr>
<td><strong>Total Non-current Liabilities</strong></td>
<td><strong>10,588</strong></td>
</tr>
<tr>
<td>Debt and borrowings</td>
<td><strong>13,481</strong></td>
</tr>
<tr>
<td>Other financial debt</td>
<td>2,988</td>
</tr>
<tr>
<td>Payables and other creditors</td>
<td>2,876</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td><strong>19,345</strong></td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>29,934</strong></td>
</tr>
<tr>
<td><strong>Total Liabilities and equity</strong></td>
<td><strong>6,235</strong></td>
</tr>
</tbody>
</table>
Plan

1. Team
2. Technology
3. Charcot-Marie-Tooth Disease
4. Alzheimer’s Disease
5. Growth Strategy and Newsflow
6. Governance and Financials
7. Terms of the IPO
### 7. Key terms of the offering

<table>
<thead>
<tr>
<th><strong>Listing Exchange</strong></th>
<th>Euronext’s Alternext market in Paris</th>
</tr>
</thead>
</table>
| **Transaction Structure** | Public offering in France  
Global Institutional Placement in France and outside France (outside the United-States, South Africa, Canada, Australia and Japan) |
| **Price range** | €10.82 – €13.20 per share |
| **Offering size** | 3,036,044 new shares issued representing €36.4 M based on the mid-range price (€12.00) |
| **Extension Clause** | Up to 455,406 new shares, representing 15 % of the initial size of the offering |
| **Overallotment Option** | Up to 523,717 new shares, representing 15% of the offering after exercising of the Extension Clause |
| **Gross total amount of the IPO** | €36.4 M (excluding the exercise of the Extension and Overallotment Options, based on the mid-range price) |
| **Use of Proceeds** | CMT 1A : finalise Phase 3 for adults launched end 2015 and prepare /launch a clinical study in children  
Alzheimer’s disease: prepare and launch the next Phase 2 expected in H2 2017  
Strengthen the company’s financial structure |
| **Subscription agreement** | Total amount of €23.0 M:  
- Existing shareholders: €8.6 M (Truffle Capital, ZAKA, IPSEN Pharma)  
- New investors: €14.3 M (Financière Arbevel, Galapagos, Institut Mérieux, Groupe Dassault, Claude Berda, Michel de Rosen) |
| **Lock-up** | Company: 180-day period  
98.3% of existing shareholders: 100% of shares for a 180-day period/ 90% of shares for a 270-day period/ 80% of shares for a 360-day period and 50% of shares for a 540-day period |
| **Tax regime** | Eligible for PEA-PME / ISF TEPA  
Qualification of Innovative Company by BPIFrance |
7. Indicative timetable

- **June 24th, 2016**: AMF visa on the prospectus
- **June 27th, 2016**: Announcement of IPO, beginning of the subscription period
- **June 29th, 2016**: SFAF meeting
- **July 12th, 2016**: End of the subscription period for the public offering
- **July 13th, 2016**: Pricing and allocation
- **July 15th, 2016**: Settlement and delivery
- **July 18th, 2016**: First tradings of Pharnext shares on Alternext
- **August 17th, 2016**: Deadline for exercise of the overallotment option
7. Shareholding Structure

Before IPO\(^1,3\)  
(number of shares: 7,781,922)

- **Pierre Bastid**: 19.5%
- **Truffle Capital**: 37.7%
- **IPSEN**: 2.1%
- **Founders/Managers**: 17.7%
- **Other historical investors**: 23.0%

Post IPO\(^2,3\)  
(number of shares: 10,817,966)

- **Public**: 24.2%
- **Founders/Managers**: 12.7%
- **IPSEN**: 2.3%
- **Truffle Capital**: 28.4%
- **Pierre Bastid**: 15.3%
- **Other historical investors**: 17.1%
- **Other historical investors**: 23.0%

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1: after conversion of Convertible Bonds  
2: after issuance of new shares, based on the mid-range price of the initial offering  
3: excluding potential dilution of 1,069,469 shares from BSA and BSPCE holders. BSA = Bons de Souscription par Action (stock subscription warrants). BSPCE = Bons de Souscription de Parts de Créateur d’Entreprise (founders warrants).
7. Why Invest in Pharnext?

- An unrivalled team strongly supported by a world-renowned scientific advisory board
- Two products in advanced clinical development, including one in Phase 3
- A faster, safer, more efficient and affordable drug development process
- A clear-cut value creation strategy for unmet needs in neurodegenerative diseases
- Development of a high-value portfolio applicable to a broad spectrum of diseases
- Pleotherapy: Unique knowledge of diseases’ networks leading to synergistic lower dose combinations of repositioned drugs
- Two products in advanced clinical development, including one in Phase 3
7. Key Takeaways – Lead Product

- **The disease: Charcot-Marie-Tooth type 1A (CMT1A)**
  - Chronic inherited neuropathy leading to muscle atrophy in extremities
  - Highly debilitating as the disease progresses
  - Despite growing interest from industry, no approved treatment and dire pipeline

- **Pharnext’s product: PXT3003**
  - Patented low dose combination of 3 drugs already approved in unrelated indications
  - Successfully evaluated in a placebo-controlled Phase 2 study in 80 patients
  - Phase 3 currently ongoing in 300 patients across US and Europe
  - Intermediate analyses in 2017, final results in 2018 and potential market approval in 2019
  - Major commercial potential > $1bn in US and EU5
  - Large and robust Intellectual Property until at least 2030