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Sensorion is a clinical-stage biopharmaceutical company focused on developing first-in-class therapies to treat inner ear disorders

**Company**
- 20 employees, 16 in R&D (1MD, 7 PhD)
- Headquartered in Montpellier, France
- Spin off of INSERM in 2009

**Product Candidates**
- SENS-111 for Acute Unilateral Vestibulopathy (AUV)
- SENS-401 for hearing disorders

**Technology Platform**
- Research and non-regulatory development to support pipeline expansion and attract pharma partners

**Financial Details**
- Listed on Euronext Growth Paris since IPO in 2015 (ALSEN)
- €7.6M as of 31st of December 2017
- €8.65M raised on May 18, 2018 from Institutional Investors
Investment Highlights

Deep Pipeline

“Pure player” industry pioneer focused on inner ear disorders
- U.S. IND/EU voluntary harmonisation procedure (VHP) granted to conduct Phase 2 trial of SENS-111 in AUV
- Received Orphan Drug Designation (ODD) in EU for SENS-401 in Sudden Sensorineural Hearing Loss and Phase 1 completed
- Received Orphan Drug Designation (ODD) in the US for SENS-401 in Platine-Induced Ototoxicity and Phase 1 completed

Significant Market Opportunities

- Inner ear disorders represent a global market of $10+ billion
- Millions of patients suffer from vestibular and hearing disorders, representing a huge financial burden on healthcare system (e.g., $122B are spent per year in the US to manage patients suffering from hearing loss)

Strong IP Protection

- Pipeline covered by 7 patent families, including composition-of-matter and use patents in inner ear disorders

Technology Platform

- Capabilities include high content in vitro screening (molecular biology, neuronal cell culture techniques) and in vivo models of hearing loss, vestibular dysfunction and tinnitus
Roadmap for Success

**01** Cement French Leadership in inner ear disorders

- Continue to advance one of the most advanced pipeline of the industry with therapies in Vertigo, Sudden Sensorineural Hearing Loss and Cisplatin-induced ototoxicity
- Be a valuable member of the French scientific ecosystem whose reputation is stellar globally

**02** Invest in complementary pipeline, unlock additional value

- Leverage the scientific platform to enrich the pipeline
- Develop new collaborations (ie. Cochlear...)

**03** Attract institutional investors

- Expand institutional investors pool who are inspired by the company and are willing to support it mid and long-term

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**Strategic Priorities For A Pivotal Year**
Scientific Advisory Board (SAB) Leadership

Prof. Christine Petit
Chair of the Scientific Advisory Board

- Winner of the 2018 Kavli Prize in Neuroscience, which recognizes scientists for pioneering advances in our understanding of existence at its biggest, smallest, and most complex scales
  - Awarded for cutting-edge research exploring the genetics of hereditary deafness
  - Research sheds light on the molecular machinery of hearing transduction

- Professor at College de France, Chair of Genetics and Cellular Physiology, Professor at Institut Pasteur and Head of the Laboratory of Genetics and Physiology of Hearing of the Pasteur Institute, affiliated to INSERM (UMRS 1120) and Sorbonne University (Paris)

- Winner of numerous awards, including the Association for Research In Otolaryngology (ARO) Lifetime Achievement Award of Merit (USA), the International Brain Prize from Grete Lundbeck Foundation, The Hughes Knowles Prize (USA), the Louis-Jeantet for Medicine Prize (Europe, 2006), the L’Oréal Unesco Award recognizing outstanding Women in Sciences (Europe), and the Grand Prize from the INSERM (France)

- Member of the French and American Sciences Academies and the American Medical Academy
# Pipeline of Novel Drug Therapies

<table>
<thead>
<tr>
<th>Product</th>
<th>MOA / Treatment</th>
<th>Candidate Selection</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SENS-111</strong></td>
<td>Histamine H4 antagonist Treatment of acute vertigo</td>
<td></td>
<td><strong>US IND granted/VHP granted</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SENS-401</strong></td>
<td>5HT3 + calcineurin antagonist Treatment of hearing disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SENS-401</strong></td>
<td>5HT3 + calcineurin antagonist Prevention of cisplatin-induced ototoxicity</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>SENS-401</strong></td>
<td>5HT3 + calcineurin antagonist Focus on hearing outcomes achieved with Cochlear’s implants</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- **Results expected in H2 2018**
- **Phase 2 initiation in H2 2018**
- **Phase 2 ready in 2019**
- **Preclinical trials beginning in H1 2018**
Inner Ear Disorders: High Societal Costs and No Effective Treatment

Economic Burden of Hearing Loss

$122 BILLION

Cost of HEARING LOSS to US Healthcare System

Prevalence of Inner Ear Disorders in the US*

VESTIBULAR DISORDERS³ 34M**

HEARING LOSS¹ 40M

NOISE-INDUCED HEARING LOSS² 5M

Sources:
1. Auris Medical (EARS), LIFESCI CAPITAL Equity Research, March 23, 2015;
2. Noise-induced hearing loss, RNID, 2009
3. Current literature review and assumptions

*Prevalence or incidence data based on the disease pathology and available data
** Vestibular disorders include BPPV, Meniere’s disease, Vestibular migraine, AUV and other vestibular diseases. Prevalence data is based on current literature review and assumptions
# Competitive Landscape: An overview of the currently ongoing programs

<table>
<thead>
<tr>
<th>Company</th>
<th>Condition</th>
<th>Stage of Development</th>
<th>Route of Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recently Capital raised</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decibel (US)</td>
<td>Inner Ear</td>
<td>Developing a similar business model as Sensorion; raised $52M in initial funding; additional 55 m$ in 6/18</td>
<td>?</td>
</tr>
<tr>
<td>Akouos (US)</td>
<td>Gene Therapy</td>
<td>AAV-based gene therapy; developing manufacturing; raised 50 $ in 8/2018</td>
<td>Inner ear delivery</td>
</tr>
<tr>
<td><strong>Sensorion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensorion</td>
<td>AUV</td>
<td>Ongoing phase II</td>
<td>Oral</td>
</tr>
<tr>
<td>Sensorion</td>
<td>SSNHL</td>
<td>Phase II initiation in 2018</td>
<td>Oral</td>
</tr>
<tr>
<td>Sensorion</td>
<td>CIO</td>
<td>Phase II ready in 2019</td>
<td>Oral</td>
</tr>
<tr>
<td><strong>Other Key Players</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fennec (Canada)</td>
<td>CIO (hepatoblastoma)</td>
<td>Phase III • Looking for European registration</td>
<td>Intravenous</td>
</tr>
<tr>
<td><em>Nasdaq: FENC</em></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TSE:FRX</td>
<td>Meniere</td>
<td>Phase III-failed in the US, Phase III success in EU • Initiating another Ph III trial</td>
<td>Transtympanic</td>
</tr>
<tr>
<td>Otonomy (US)</td>
<td>Tinnitus</td>
<td>2 Phase III failed</td>
<td>Transtympanic</td>
</tr>
<tr>
<td><em>Nasdaq: OTIC</em></td>
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</tr>
<tr>
<td>Auris (CH)</td>
<td>SSNHL</td>
<td>1st Phase III failed (Q4 2017)</td>
<td>Transtympanic</td>
</tr>
<tr>
<td><em>Nasdaq: EARS</em></td>
<td>Vertigo</td>
<td>2nd Phase III early terminated</td>
<td>Intranasal</td>
</tr>
<tr>
<td><strong>To follow</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acousia (D)</td>
<td>Frequency (US)</td>
<td>Oricula (US)</td>
<td>Sound (US)</td>
</tr>
<tr>
<td>Audiocure (D)</td>
<td>GenVec (US)</td>
<td>Otologic (US)</td>
<td>Spiral Therapeutics (US)</td>
</tr>
<tr>
<td>Audion (NL)</td>
<td>Novus Health (UK)</td>
<td>Pragma (F)</td>
<td>Strekin (CH)</td>
</tr>
<tr>
<td>Autifony (UK)</td>
<td>O-Ray (US)</td>
<td>Quark (IL)</td>
<td>Synphora (Sweden)</td>
</tr>
</tbody>
</table>
Vestibular Disorders: Etiology & Epidemiology

**ETIOLOGY**

- Meniere’s disease
- Acute Unilateral Vestibulopathy
- Benign Paroxysmal Positional Vertigo
- Migrainous vertigo
- Other vestibular disorders
  - Wallenberg’s syndrome
  - Perilymph fistula
  - Acoustic neurinoma
  - Otitis media
  - Motion sickness

**Number of patients suffering from vestibular disorders** (in millions, in 2017)

<table>
<thead>
<tr>
<th>Country</th>
<th>Potential Treated Pool</th>
<th>Potential Treated Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>14.6</td>
<td>19.4</td>
</tr>
<tr>
<td>EU 5</td>
<td>14.2</td>
<td>19.0</td>
</tr>
<tr>
<td>Japan</td>
<td>5.6</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Vestibular Disorder: Acute Unilateral Vestibulopathy (AUV)

**What is AUV:**
Acute, severe unilateral vestibular dysfunction giving the sensation that you or your surroundings are moving (spinning, whirling or moving vertically or horizontally)

**Incidence:**
Between 3.5 to 15.5 per 100,000 people
(68,000 patients in 2017 in G7 countries)

**Sudden occurrence of AUV:**
Crisis lasts between 4 and 7 days

**Complications:**
The AUV crisis can lead to long-term complications in ~50% of the cases
These complications significantly impact patients’ quality of life due to:
- Dizziness, imbalance, abnormal gait, unsteadiness increasing the risk of severe fall by 12
- Psychological handicaps and disabilities

**Acute need for safe, effective drugs is clear**

---

"AUV is assumed to be an ideal model for vestibular diseases. If this trial shows a benefit, the drug is assumed to work in other diseases leading to dizziness and vertigo."

Pr. Michael Strupp
Ludwig-Maximilians-University Munich, Germany (KOL event, Nov. 29, 2016)
SENS-111 for Acute Unilateral Vestibulopathy

**SENS-111**

- AUV is a significant unmet medical need
  - Current standard of care is suboptimal: no direct effect on vertigo, sedative effects
  - 50% of patients complain of chronic dizziness/imbalance post-AUV

- First-in-class treatment
  - First-in-class oral H4 receptor antagonist
  - Mechanism of action well-defined and understood (H4R antagonist)
  - SENS-111 acts through modulation of vestibular neuron excitability. It is not sedative.

- IP protection
  - 3 composition of matter and use patent families
  - IP issued in all major markets

- SENS-111 demonstrated activity in phase 1b
  - 100 healthy volunteers enrolled
  - Reduced vertigo symptoms from doses of 50 mg/day to 200 mg/day using caloric induction
  - No sedation and significant adverse events reported

- 2 phase 2 trials underway
  - Ph II b: Enrollment of 207 patients planned
  - Final phase 2 read-out in H2 2018
  - Trial being conducted in the US, Europe and South Korea
  - Ph II a study to compare safety and PD effects to meclizine
SENS-111: Mechanism of Action in Vertigo

Balanced Vestibular Neuronal Activity
- Left
- Right

Unbalanced Vestibular Neuronal Activity
- Right

Mechanical Stimulation

Sensory Hair Cell

Generation of Electrical Signal
Neural Activity = Action Potentials

Glu

Primary Neuron

Peripheral INSULT

Hair Cell Damage
and/or
Synaptic Uncoupling
and/or
Neuron Damage

Neuronal Activity = Action Potentials

VERTIGO
SENS-111: Mechanism of Action in Vertigo

**Mechanical Stimulation**

- Sensory Hair Cell
- Glu
- Primary Neuron

**Generation of Electrical Signal**

- Neural Activity = Action Potentials

**Balanced Vestibular Neuronal Activity**

**VERTIGO**

**Hair Cell Damage** and/or **Synaptic Uncoupling** and/or **Neuron Damage**

**SENS-111**

**Balanced Vestibular Neuronal Activity**
SENS-111: Phase 1b Study Demonstrated Safety

**Phase 1 study design**

**PART A**

Randomized placebo controlled in 100 healthy volunteers

- Single oral dosing from 100 mg to 500 mg
  - 5 cohorts of 8 HV (6 SENS-111, 2 placebo)

**PART B**

4 to 7 days of daily oral dosing from 50 mg to 250 mg

- 5 cohorts of 12 HV (9 SENS-111, 3 placebo)

**Study endpoints**

**PRIMARY**

- Evaluate the safety of single and repeated ascending doses of SENS-111
- Determine the pharmacokinetic profile of SENS-111

**SECONDARY**

- Document the effect of a routine vestibular stress test (caloric induction) and activity of SENS-111 on part B

1. SENS-111 is well-tolerated
2. Pharmacokinetics of SENS-111 is linear with doses up to 200 mg/day, slightly over proportional at higher doses and **allows for once-a-day dosing**
3. SENS-111 demonstrated an activity related to plasma concentrations ranging between 0 and 500-700 ng/mL in vertigo induced by a caloric test
4. Clinical data are consistent with data obtained in preclinical testing
5. Valuable data available to guide phase 2 study design and selection of doses to be tested
SENS-111 Phase 2 Program: 100 and 200 mg vs. Placebo

25 CLINICAL SITES
In Europe, US, Korea

1 PRIMARY ENDPOINT
Vertigo intensity (visual analogic scale)

20% IMPROVEMENT
vs PLACEBO
207 patients

A multicenter, randomized, double-blind, placebo-controlled study

PLANNING
Q1 2017 Centers opening
Q4 2018 readout

SCREENING
TREATMENT
FOLLOW-UP

Visit D1
Visit D2
Visit D3
Visit D4
Visit D5
Visit D14
Visit D28

Randomization
Dose 1: 100 mg
Dose 2: 200 mg
Placebo

Visit

Q1 2017
Centers opening
Q4 2018
readout
The study is a 4-period, 4-treatment (SENS-111 100mg, SENS-111 200mg, placebo and meclizine) double-blind, double dummy, cross over design with a randomized sequence order with 32 subjects.

The aim of the study is to assess the effect of SENS-111 on sedation and cognitive disturbances in subjects susceptible to motion sickness and otherwise healthy. The effect of SENS-111 will be compared to Meclizine, an H1-antagonist for the treatment of motion-induced nausea.

The trial will be conducted in the Netherlands. Subjects will receive the 4 treatment regimens (seliforant 100 mg and 200 mg, meclizine 50 mg, or placebo condition) once, one week apart, in a random order.

Primary and secondary endpoints will include measures of vigilance and attentiveness, sedation, balance, and activity of seliforant based on severity of induced nausea and associated symptoms.
Cochlear diseases: Etiology & Epidemiology

**ETIOLOGY**

Other cochlear disorders include congenital hearing loss (Usher syndrome, Pendred syndrome, Cogan syndrome...), otitis media/externa, loss of residual hearing after cochlear implant surgery, ototoxicity from drugs other than cisplatin.

**Number of patients suffering from cochlear disorders** (in millions)

- 2017: 45.3
- 2022: 49.5
- 2027: 54.3

The number of cochlear disease patients in the US is currently estimated at approximately 45 million.
Cochlear Disorder: Sudden Sensorineural Hearing Loss (SSNHL)

What is SSNHL:
The sudden onset of a significant hearing loss due to dysfunction of the cells of the cochlea and central auditory structures.

Incidence:
Between 27 to 35 per 100,000 people (218,000 patients in 2017 in G7 countries)\(^1\). >70% cases are idiopathic, known causes include noise/head trauma, ischemia and infection.

Sudden occurrence of SSNHL:
Hearing loss develops over less than 72 hrs, hearing sensitivity is reduced by at least 1,000 fold in the affected ear(s).

Complications:
More than 50% suffer from permanent, disabling hearing loss, mostly those with initial severe to profound hearing loss. Complications significantly impact patients’ quality of life due to:
- Difficulty communicating, social isolation, cognitive decline
- Accompanying tinnitus

Acute need for safe, effective drugs is clear

Sudden sensorineural hearing loss (SSNHL) is considered an otological emergency. It may present as an isolated condition or be the presenting feature of a systemic disease process. Idiopathic sudden sensorineural hearing loss (ISSNHL) is diagnosed when an underlying cause or condition cannot be identified.

Lawrence & Thevasagayam
Clinical Otolaryngology
June 2015, 40(3):176-82

\(^1\) Company estimate based on publicly available data (in the US, Japan, Germany, France, the UK, Italy and Spain)
SENS-401 for Sudden Sensorineural Hearing Loss

**SENS-401**

**SSNHL is a significant unmet medical need**
- No current effective treatment recommended in clinical practice guidelines
- More than 50% of patients suffer from permanent, disabling hearing loss, mostly those with severe to profound hearing loss
- Tinnitus, often disabling, is almost always associated with hearing loss

**First-in-class treatment**
- First-in-class oral 5HT3 receptor antagonist & calcineurin inhibitor
- The Mode of Action (MoA) is well-defined and understood
- SENS-401 acts through reduction of cochlear cell death and neurodegeneration

**IP protection**
- 2 patent families filed
- Orphan Drug Designation from EMA

**SENS-401 demonstrated safety and PK in phase 1**
- 36 healthy volunteers enrolled in a double-blind, randomized, multiple ascending dose design (7 days)
- No serious or significant adverse events reported, safety profile comparable to placebo
- Pharmacokinetics match effective systemic exposures in preclinical model

**Phase 2 trial planned for 2018**
- Trial to be conducted in the US and Europe
- Principal investigator and first centers identified

**Collaborative trial with Cochlear Ltd.**
- Collaboration signed December 2017
- Cochlear invested €1.6 million in shares of Sensorion
- Will study SENS-401 in combination with cochlear implants
- Preclinical studies to begin in H1 2018
- Mid-stage clinical studies may start in 2019

SSNHL is a significant unmet medical need.
SENS-401: Reduces Hair Cells Apoptosis By Inhibiting The Calcineurin Activation

Disrupted Ca\(^{2+}\) Homeostasis
Neuro Inflammation

Calcineurin Activation

- NFAT translocation: oxid stress
- Actin (cytoskeleton) depolymerization
- BAD translocation/mPTP opening/cytochromeC + AIF release/Caspase 9/3 activation

Structural degeneration, swelling and synaptic uncoupling & Apoptosis (Cell Death)

Co-dependent proteases, kinases, phospholipases and nucleases
Cytochrome C
Caspase 3 cleavage

Structural degeneration
Neuronal cell death
Apoptosis

Ca\(^{2+}\) SHT3R

Ca\(^{2+}\) SHT3R

Ca\(^{2+}\) SHT3R
A daily oral administration of SENS-401 reduces auditory deficit, improves recovery and reduces hair cell loss

MODEL
- Randomized treatment post-noise induced trauma (2h exposure at 120 dB) in rats receiving either placebo or SENS-401 PO for 14 days

BENEFIT
- Regulatory threshold for efficacy (>10 dB improvement)

Histology of hair cell layers

<table>
<thead>
<tr>
<th>Significant hair cell loss</th>
<th>Limited hair cell loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cochleograms</td>
<td>Placebo</td>
</tr>
<tr>
<td></td>
<td>SENS-401</td>
</tr>
</tbody>
</table>
Cochlear Disorder: Cisplatin-Induced Ototoxicity (CIO)

<table>
<thead>
<tr>
<th>What is CIO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisplatin administration for chemotherapeutic treatment of cancer damages the inner-ear and leads to hearing loss, tinnitus and dizziness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incidence:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 350 to 450 per 100,000 people (~500,000 patients in 2017 in G7 countries)¹</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors for CIO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young age, individual and cumulative cisplatin doses during chemotherapy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIO leads to permanent inner ear problems in 50-60% of cases</td>
</tr>
<tr>
<td>These complications significantly impact patients’ quality of life due to:</td>
</tr>
<tr>
<td>o Hearing loss, tinnitus and dizziness impacting daily life activities</td>
</tr>
<tr>
<td>o Problems in language acquisition and learning for pediatric patients</td>
</tr>
<tr>
<td>o Difficulty communicating, social isolation, cognitive decline</td>
</tr>
<tr>
<td>Potential treatments must not interfere with cisplatin efficacy</td>
</tr>
</tbody>
</table>

**Acute need for safe, effective and non-interfering drugs is clear**

Ototoxicity is a well-established toxicity associated with a subgroup of antineoplastic therapies that includes platinum chemotherapy... The impact of ototoxicity on subsequent health-related and psychosocial outcomes in these patients can be substantial, and the burden of morbidity related to ototoxic agents is particularly high in very young children.

*Landier*  
Cancer  
February 2016, 122:1647-58

¹ Company estimate based on publicly available data (in the US, Japan, Germany, France, the UK, Italy and Spain)
SENS-401 for Cisplatin-Induced Ototoxicity

- CIO is a significant unmet medical need
  - No current effective treatment recommended in clinical practice guidelines
  - More than 50-60% of pediatric patients suffer from permanent, disabling hearing loss, mostly those with severe to profound hearing loss
  - Cisplatin treatment might be reduced or stopped because of hearing loss
  - Severe social and learning disabilities

- First-in-class treatment
  - First-in-class oral 5HT₃ receptor antagonist & other undisclosed mechanism of action (MoA)
  - The MoA is well-defined and understood (SHT3 antagonism, undisclosed MoA)
  - SENS-401 acts through reduction of cochlear cell death and neurodegeneration

- IP protection
  - 2 patent families filed
  - Orphan Drug Designation for pediatric patients from US FDA

- SENS-401 demonstrated safety and PK in phase 1
  - 36 healthy volunteers enrolled in a double-blind, randomized, multiple ascending dose design (7 days)
  - No serious or significant adverse events reported, safety profile comparable to placebo
  - Pharmacokinetics match effective systemic exposures in preclinical model

- Phase 2 trial ready to start in 2019
  - Trial to be conducted in the US and Europe
SENS-401 Significantly Reduces Cisplatin-Induced Hearing Loss and Outer Hair Cell Death

Treatment
Placebo and SENS-401 at 6.6 mg/kg, 13.2 mg/kg or placebo once daily before and for 13 consecutive days after cisplatin infusion

Results: ABR Threshold Shift at Day 14
Significant improvement versus placebo
• 23-29 dB, up to 65% reduction with 6.6 mg/kg
• 22-29 dB, up to 73% reduction with 13.2 mg/kg

Results: DPOAE Amplitude Loss
Significant improvement versus placebo
• 1.5-19 dB, up to 78% reduction with 6.6 mg/kg
• -1.2-14.6 dB up to 58% reduction with 13.2 mg/kg (p:0.08)

Cochleograms
Significant enhancement of OHC survival 22-264% for both doses

Pharmacokinetics
• Dose dependent plasma concentrations and PK profile
• Inner ear exposure: about 50% plasma exposure
• Perilymph exposure: about 30% plasma exposure

Conclusions: SENS-401 effective in models of CIO on ABR, DPOAE and OHC preservation. Concentrations are higher than IC₅₀ calcineurin inhibition
Very good clinical tolerance of SENS-401

- Plasma concentrations corresponding to those observed in animal models that showed the effect of SENS-401
- Pharmacokinetic data enabling Sensorion to select the doses for phase 2 testing

**Phase 1 study design**

- **Cohort 1** (12 subjects)
  - 29 mg SENS-401 or placebo once daily for 7 days

- **Cohort 2** (12 subjects)
  - 29 mg SENS-401 or placebo twice daily for 6 days and a single dose of SENS-401 or placebo on day 7

- **Cohort 3** (12 subjects)
  - 43.5 mg SENS-401 or placebo twice daily for 6 days and a single dose of SENS-401 or placebo on day 7

**Study endpoints**

- **PRIMARY**
  - Evaluate the safety of single and repeated ascending doses of SENS-401

- **SECONDARY**
  - Determine the pharmacokinetic profile of SENS-401
Sensorion And Cochlear Collaborate To Improve Hearing Outcomes Of Patients Recieving Cochlear Implants with SENS-401

Cement LEADERSHIP in Inner Ear Disorders

Invest in COMPLEMENTARY EXPERTISE

Identify Opportunities to IMPROVE PATIENTS’ OUTCOMES

Strategic Rationale For A Complementary Partnership

- Collaboration signed in December 2017
  - Cochlear invested €1.6 million in shares of Sensorion
  - In exchange, Cochlear received a right of first negotiation for a global license to use SENS-401 in patients with certain implantable devices
- Sensorion and Cochlear to study SENS-401 in combination with cochlear implants
- Preclinical studies to begin in 2018
- Mid-stage clinical studies may start in 2019
Our In-House Screening Platform is Dedicated to Inner Ear Disorders

- **15+ YEARS**
  - Academic & Pharma know-how
- **COMPREHENSIVE TOOLBOX**
  - To explore vestibular & cochlear applications
- **AAALAC CERTIFIED**
  - In-house platform

Clinical drug candidate

- CMC
- Formulation
- Toxicology and safety
- In-vivo disease models
- In-vivo screening
- Target identification
- Local & systemic pharmacokinetics
- * Outsourced
Financial Update

### Cash position

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>€7.6m</td>
<td>Cash as of 31/12/2017</td>
</tr>
<tr>
<td>€8.65m</td>
<td>Cash raised on May 18, 2018 from Institutional Investors</td>
</tr>
<tr>
<td>up to €9.0m</td>
<td>Flexibility with Convertible Notes from Yorkville</td>
</tr>
<tr>
<td>€8.1m</td>
<td>2017 cash used for operations</td>
</tr>
</tbody>
</table>

### Share information

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPO in 2015</td>
<td>Euronext Growth Paris: ALSEN</td>
</tr>
<tr>
<td>Number of outstanding shares (18 May 2018)</td>
<td>12 905 932</td>
</tr>
<tr>
<td>Current share price (6 June 2018)</td>
<td>€3,0</td>
</tr>
<tr>
<td>Market capitalization (6 June 2018)</td>
<td>€38.7m</td>
</tr>
</tbody>
</table>

Shareholding structure on May 18th, 2018

- Innobio (Bpifrance): 45.9%
- Inserm Transfert Initiative: 27.1%
- Cochlear: 7.6%
- Novalis LifeSciences: 5.2%
- Nyenburgh: 4.1%
- Alto Invest: 4.9%
- Free Float: 4.9%
## Catalysts Over Next 18 Months

<table>
<thead>
<tr>
<th>Catalyst</th>
<th>Expected Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate SENS-401 phase 2 clinical trial in SSNHL</td>
<td>H2 2018</td>
</tr>
<tr>
<td>Initiate SENS-111 phase 2a study to compare seliforant with meclizine</td>
<td>H2 2018</td>
</tr>
<tr>
<td>Initiate preclinical studies in collaboration with COCHLEAR</td>
<td>H1 2018</td>
</tr>
<tr>
<td>SENS-111 AUV phase 2 study results</td>
<td>H2 2018</td>
</tr>
<tr>
<td>SENS-401 phase 2 ready in Cisplatin-Induced Ototoxicity in pediatric population</td>
<td>2019</td>
</tr>
</tbody>
</table>
**Investment Highlights**

**Deep Pipeline**
- “Pure player” industry pioneer focused on inner-ear disorders
  - U.S. IND/EU voluntary harmonisation procedure (VHP) granted to conduct Phase 2 trial of SENS-111 in AUV
  - Received Orphan Drug Designation (ODD) in EU for SENS-401 in Sudden Sensorineural Hearing Loss and Phase 1 completed
  - Received Orphan Drug Designation (ODD) in the US for SENS-401 in Platine-Induced Ototoxicity and Phase 1 completed

**Significant Market Opportunities**
- Inner ear disorders represent a global market of $10+ billion
- Millions of patients suffer from vestibular and hearing disorders, representing a huge financial burden on healthcare system (e.g., $122B are spent per year in the US to manage patients suffering from hearing loss)

**Strong IP Protection**
- Pipeline covered by 7 patent families, including composition-of-matter and use patents in inner ear disorders

**Technology Platform**
- Capabilities include high content in vitro screening (molecular biology, neuronal cell culture techniques) and in vivo models of hearing loss, vestibular dysfunction and tinnitus
Thank You