

Unlocking the potential of  
advanced therapies  
for hearing loss



May 2023



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# SENSORION

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Our vision is to help people with inner ear  
hearing disorders to live life with unlimited  
connections



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# Sensorion: Overview

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- Sensorion currently develops two **Gene Therapy** (GT) programs in the ear, targeting monogenic forms of deafness with **pediatric** and **adult** onset:
  - **OTOF-GT** caused by mutations of the gene encoding for **otoferlin**, EU & US **ODD**, US **RPDD**
  - **GJB2-GT** related to mutations in **GJB2 gene (candidate selected)**
  - Prospective natural history studies ongoing, strong European eco-system in place
- **Oral small molecule asset SENS-401**, for the prevention and treatment of hearing loss:
  - **Sensorion and Cochlear Ltd collaboration** (ongoing clinical Proof-of-Concept study)
  - **Cisplatin-Induced Ototoxicity** (ongoing clinical Proof-of-Concept study)
  - **Sudden Sensorineural Hearing Loss** (completed Phase 2 study)
- **Exclusive relationship with Institut Pasteur** in the field of hearing genetics, several GT programs initiated under strategic collaboration
- Strong partnerships with key players in hearing care and devices, including **Necker Hospital (Paris, FR)**, **Cochlear Ltd. (ASX listed)** and **Sonova (global hearing aid market leader)**
- Strong shareholder base including **leading blue-chip investors; listed on Euronext Growth**



# We Want People With Inner Ear Hearing Disorders To Live Life With Unlimited Connections



## 1. Make OTOF-GT the Standard of Care

- Replacing cochlear implantation
- Transforming lives for babies

## 2. Develop GJB2-GT and Other GT Products

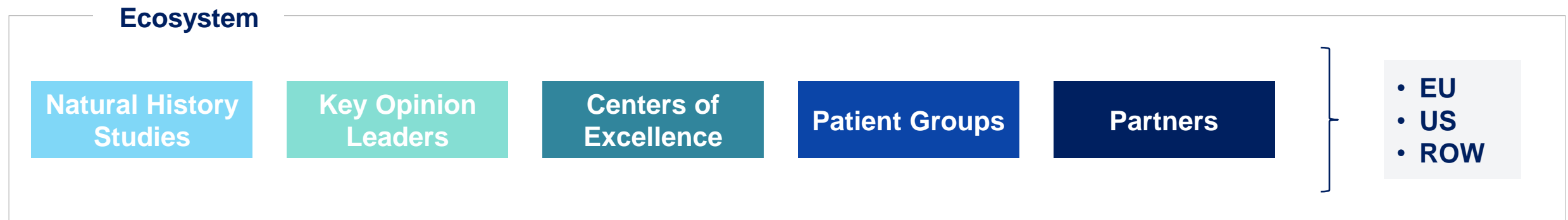
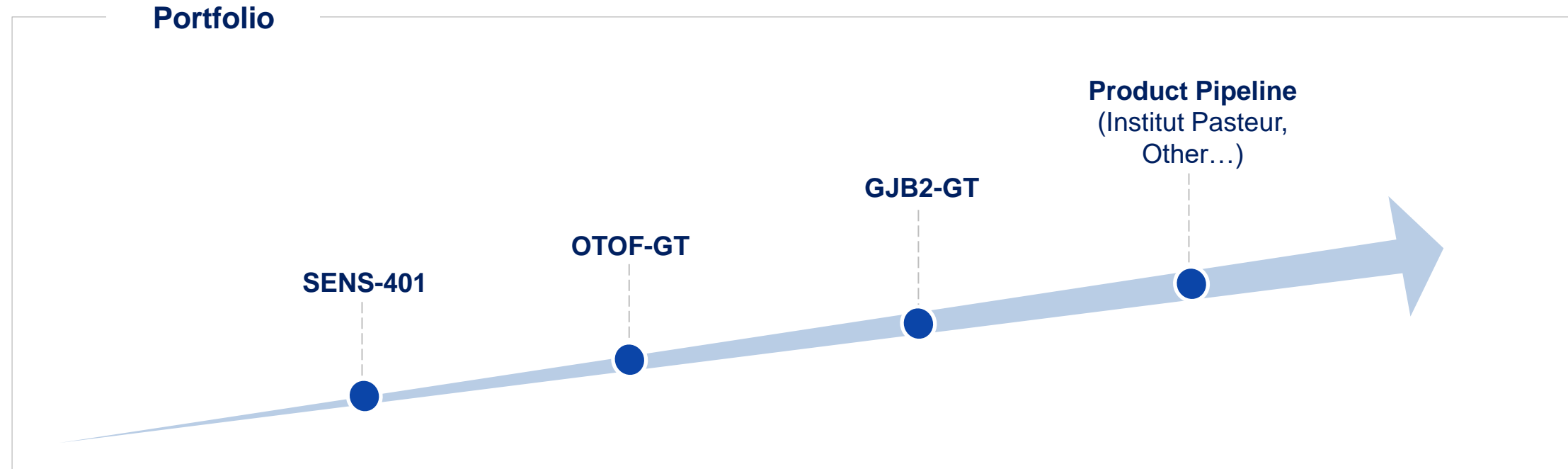
- Addressing adolescent and adult populations

## 3. Enjoy Life to the max with 24/7 Access to Sound

- Kids navigating with ease in school
- Adults effortlessly adjusting to the different voices of multiple talkers in workplace, social spaces
- Reducing cognitive effort and mental workload

# Our Vision: A Global Franchise

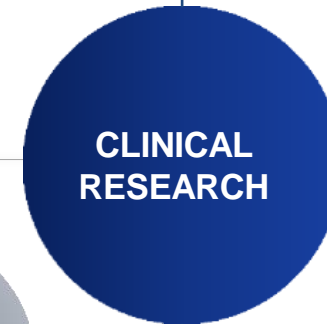
## Establishing Leadership In The Hearing Space



# Together With Best-In-Class Partners We Can Transform the Current Standard of Care



- Interdisciplinary approach to the mechanisms of hearing and its damage
- Research in deafness therapies and preclinical studies



- Global leader in implantable hearing solutions
- Currently developing a drug/ device combination to maintain residual hearing after CI surgery



- Biggest retail chains in the world
- A significant shareholder in Sensorion
- Collaboration to initiate Natural History in presbycusis



- Functional exploration in the field of otolaryngology and neurosciences (combining biological and audiological data)



- EU reference center for monogenic forms of deafness
- Natural History Study currently running for all monogenic forms of deafness; extension in EU clinical sites in preparation (OTOCONEX study)



## French Military Biomedical Research Institute

- Access to a military population at risk of noise-induced hearing loss
- Strong medical network, strict monitoring and precise, regular, well-documented explorations
- Partnership to identify biomarkers for noise-induced hearing loss

# Sensorion is Well Positioned to Transform the Hearing Landscape

## - Institut Pasteur Partnership Provides GT Pipeline

### GENE THERAPY

#### Otoferlin deficiency (OTOF-GT)

##### CTA enabling studies

- Hearing restoration in DFNB9 pediatric patients

#### Connexin 26 deficiency (GJB2-GT)

##### Candidate selected

- Hearing restoration in DFNB1 **pediatric patients**
- Hearing restoration in **childhood onset** of hearing loss linked to GJB2 mutations
- Hearing restoration in early onset severe **presbycusis** linked to GJB2 mutations

### SMALL MOLECULE: SENS-401

#### Sudden Sensorineural Hearing Loss (SSNHL)

##### AUDIBLE-S Ph2 study completed

- Meaningful and statistically significant effect on PTA change over time in a large idiopathic population
- Complete PTA recovery in 50% of treated patients

#### Cisplatin-Induced Ototoxicity (CIO)

##### NOTOXIS Ph2 study ongoing

- Assess prevention of the ototoxicity induced by Cisplatin in patients with neoplastic disease


#### Cochlear Implantation (CI)

##### Ph2 study ongoing

- Assess preservation of the residual hearing after cochlear implantation
- Evaluate the presence of SENS-401 in the perilymph



# Sensorion's Portfolio Of Advanced Hearing Loss Therapies

	Product	Indication	Discovery	In-vivo POC	Preclinical	Phase 1	Phase 2	Phase 3	Upcoming Milestones (estimated)
RESTORE	OTOF-GT*	Otoferlin Deficiency							Clinical Trial Application Q2 2023
	GJB2-GT*	Adult onset (presbycusis)							Candidate Selected
	GJB2-GT*	Pediatric progressive							Candidate Selected
	GJB2-GT*	Congenital onset							Candidate Selected
PREVENT	SENS-401	Hearing preservation after CI						 Cochlear™	Preliminary Results mid 2023
	SENS-401	Cisplatin-Induced Ototoxicity							Preliminary Results H2 2023
TREAT	SENS-401	SSNHL							Exploring Partnering Opportunities

3SBio has a right of first refusal with respect to licensing in Greater China of SENS-401 (except in combination with cochlear implants) and OTOF-GT

\*Option to obtain a licence from Institut Pasteur (pre-defined financial terms and other terms to be negotiated)

# An Experienced Leadership Team and SAB



**NAWAL OUZREN**  
*Chief Executive Officer*



**GÉRALDINE HONNET**  
*Chief Medical Officer*



**DAVID LAWRENCE**  
*Chief Financial Officer*



**STEPHANIE FILIPE**  
*Head of PMO*



**LAURENT DESIRE**  
*Head of Preclinical Development*



**CHRISTINE LE BEC**  
*Head of CMC Gene Therapy*

**SENSORION**  
(Since 2017)

**SHIRE**  
(2016-2017)  
Head of the Global Genetic  
Diseases Franchise

**BAXALTA**  
(2014-2016)  
Vice President  
of the Global Hemophilia Franchise

**SENSORION**  
(Since 2020)

**GENETHON**  
(2011-2020)  
Director of Development

**TRANSGENE**  
(2007-2011)  
Responsible of development  
of infectious diseases programs

**SENSORION**  
(Since 2023)

**VALNEVA**  
(2017-2021)  
Chief Financial Officer

**SYNPROMICS**  
(2011-2019)  
Co-Founder & Board member  
**GSK/CHIRON/ACAMBIS**  
(1988-2006)

**SENSORION**  
(Since 2020)

**CELLECTIS**  
(2016-2020)  
Program Leader &  
Preclinical Manager

**OTR3**  
(2008-2015)  
R&D Director & Clinical Project  
Manager

**SENSORION**  
(Since 2020)

**YPOSKESI**  
(2017-2020)  
Head of Cellular &  
Molecular Biology Unit

**DIAXONHIT**  
(2012-2017)  
R&D Executive Director

**SENSORION**  
(Since 2020)

**GENETHON**  
(1996-2020)  
Head of CMC  
Analytical Department

## Scientific Advisory Board

- **Pr Christine Petit**, France, Chair SAB, Professor, Institut Pasteur
- **Pr Alain Fischer**, France, Professor, Collège de France
- **Dr. Robert Dow**, UK, Chief Medical Officer, Scendea
- **Dr. Paul Avan**, France, Head of the Center for Research, Hearing Institute (Paris)
- **Dr. Diane Lazard**, France, Principal Associate Investigator, Hearing Institute (Paris)
- **Dr. Hernán López-Schier**, Germany, Senior Group Leader & Research Unit Director at the Helmholtz Center (Munich)

# We Have Established Strong Internal Capabilities To Ensure Successful Execution



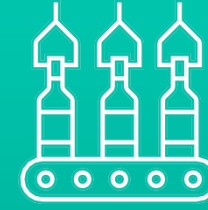
## PRECLINICAL CAPABILITIES FOR SMALL MOLECULES & GT PROGRAMS

- **Cell Model Platform:** assays development, target & drug discovery, biomarkers
- **Animal Pharmacology platform:** from the POC to the dose-finding studies in disease-relevant rodent models, surgery
- **Technology & Innovation platform:** design and select the best drug candidate (capsid & promoter selection)



## CLINICAL EXPERIENCE

- 400 people enrolled in Sensorion led clinical trials
- Set-up audio tests in different countries, languages
- Central reading of audiometry testing
- In-house audiology expertise of more than 20 years for the pediatric and adult populations and cochlear implants



## CMC GENE THERAPY FACILITIES

- **Process development:** non-GMP manufacturing from small scale up to 50L in bioreactor
- **Analytical development:** development of product-specific analytical methods, in-house generic assays to support process development and AAV manufacturing



## REGULATORY EXPERTISE

- Develop regulatory strategies to ensure expedited product development including gene therapy
- Regulatory Agency interaction (EU/US)
- Shape the treatment guidelines and standardize clinical endpoints

# Our Team has Significant Experience in Gene Therapy Clinical Development

The team has been involved in 15+ programs from preclinical to BLA filing...

10

Preclinical

4

Clinical

1

BLA filing

... using different technologies...

15

Gene therapy  
(AAVs / LVs)

1

Cell  
therapy

1

Gene editing

... across different organs and indications...



... with multiple organizations



AUDENTES  
THERAPEUTICS

GENETHON  
CURE THROUGH INNOVATION

rocket  
pharma

SOLID  
BIOSCIENCES

cellectis

ESTEVE  
Advancing health together

GenSight  
BIOLOGICS

Necker  
ENFANTS MALADES  
HÔPITAL UNIVERSITAIRE

SAREPTA  
THERAPEUTICS

Orchard  
therapeutics



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# **GENE THERAPY PROGRAMS**

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# Sensorion's Gene Therapy Programs Target Rare Auditory Diseases

## FIRST PROGRAMS RESULTING FROM THE INSTITUT PASTEUR COLLABORATION

### OTOFERLIN DEFICIENCY

- Patients with mutations in OTOF suffer from severe to profound sensorineural prelingual non-syndromic hearing loss
- Otoferlin deficiency could be responsible for up to 8% of all cases of congenital hearing loss
- Prevalence ~20,000 in the USA + EU
- Incidence ~1,100 per year in USA + EU
- EU and US ODD
- US FDA has granted RPDD

### GJB2-RELATED HEARING LOSS

We have identified three forms of hearing loss associated with *GJB2* gene mutations:

- Early onset of severe presbycusis
- Childhood onset
- Congenital onset
- ~100,000 patients between 30 and 69 years old thought to be affected by a monogenic form of presbycusis due to *GJB2* mutations
- Prevalence of congenital and childhood onset forms are estimated to be around 200,000 patients as around 50% of autosomal recessive non syndromic hearing loss cases are thought to be from *GJB2* mutations

Sources: Akil et al. 2019 ([link](#)), Orphanet ([link](#)), NIH ([link](#)), company estimates based on publicly available population data, Chardan 2020 report, Bryan, Garnier & Co 2019 report, Institut Pasteur, Boucher et al. 2020 ([link](#))

**DELAYED DIAGNOSIS – NOT SUSPECTED AT FIRST SIGHT**

**GENE THERAPY HAS A LIFE-CHANGING POTENTIAL FOR THESE AUDITORY DISEASES**

# Aiming To Develop Best-in Class And First-in Class Gene Therapy

CRITERIA	SENSORION
AAV capsid selected for high-level of target cells specificity	✓
GT product showing high level of target cells transduction	✓
Limited off-target tissue biodistribution	✓
Surgical approach developed and mastered by ENTs surgeons	✓
Natural History Study preparing execution of the clinical trial	✓
Regular engagement with regulatory agencies	✓

# Gene Therapy Pediatric Indications Have Blockbuster Sales Potential

## OTOF-GT is the perfect pilot program

- Well understood biology and pathology of the otoferlin deficiency
- Full functionality of the remaining chain
- High specificity for the inner hair cells (IHCs), no off-target effect expected



- OTOF-GT will be the pilot program demonstrating that GT is a relevant medical approach for the inner ear
- OTOF-GT will establish understanding of GT in the inner ear by the Regulators and the Payers for future GT programs
- Medical plausibility and target population have been confirmed through :
  - ✓ Orphan Drug Designation in the US and EU
  - ✓ Rare Pediatric Disease Designation with eligibility for voucher in the US

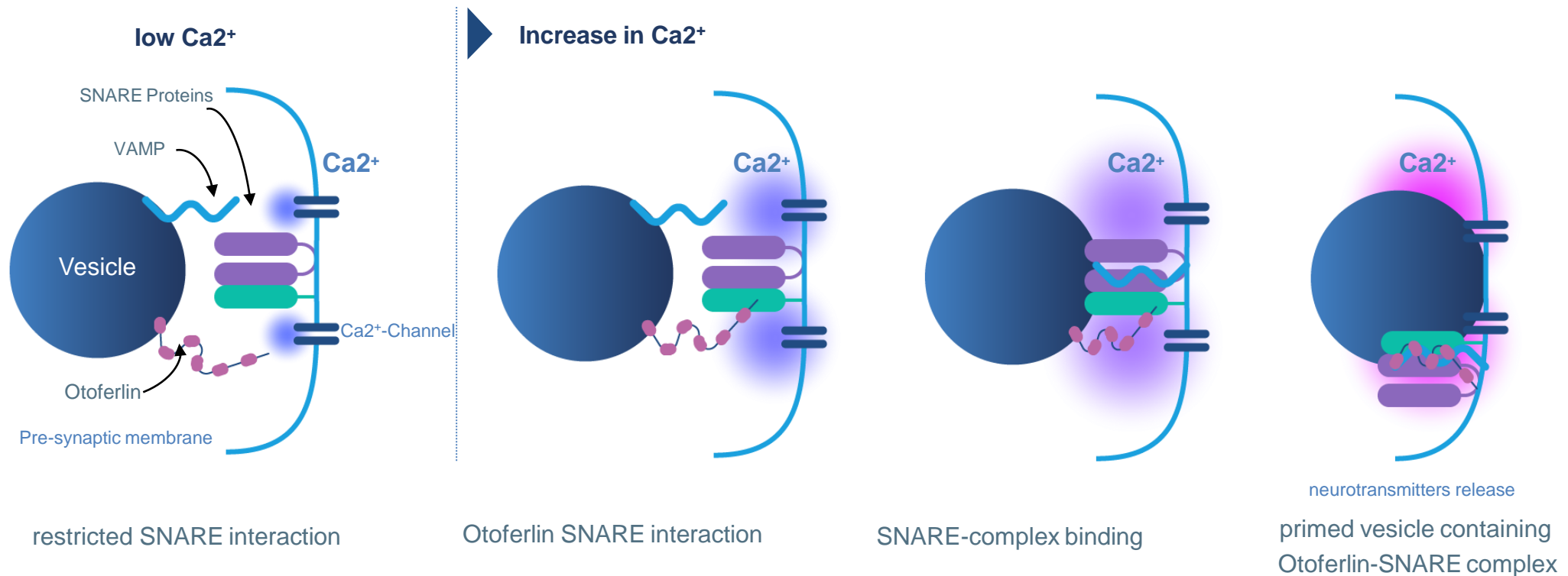
## Sales potential illustration

**OTOF-GT**

**GJB2-GT**

Sources: Sensorion, AT Kearney market research

# OTOF Gene Encodes Otoferlin, A Key $\text{Ca}^{2+}$ Sensor Protein

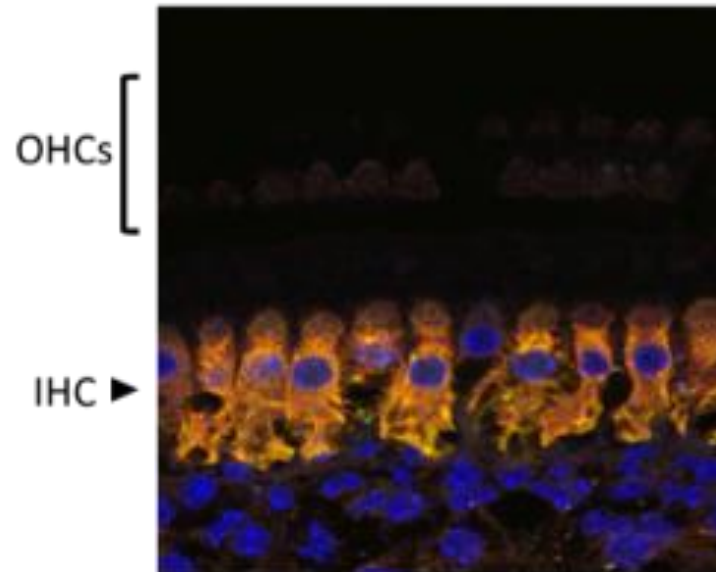


Model illustrating calcium regulation of otoferlin/SNARE interaction in the hair cell – Adapted from Ramakrishnan *et al.* 2014

**OTOF is the gene coding for the otoferlin protein, a  $\text{Ca}^{2+}$  sensor for vesicle fusion and vesicle pool replenishment at auditory hair cell ribbon synapses**

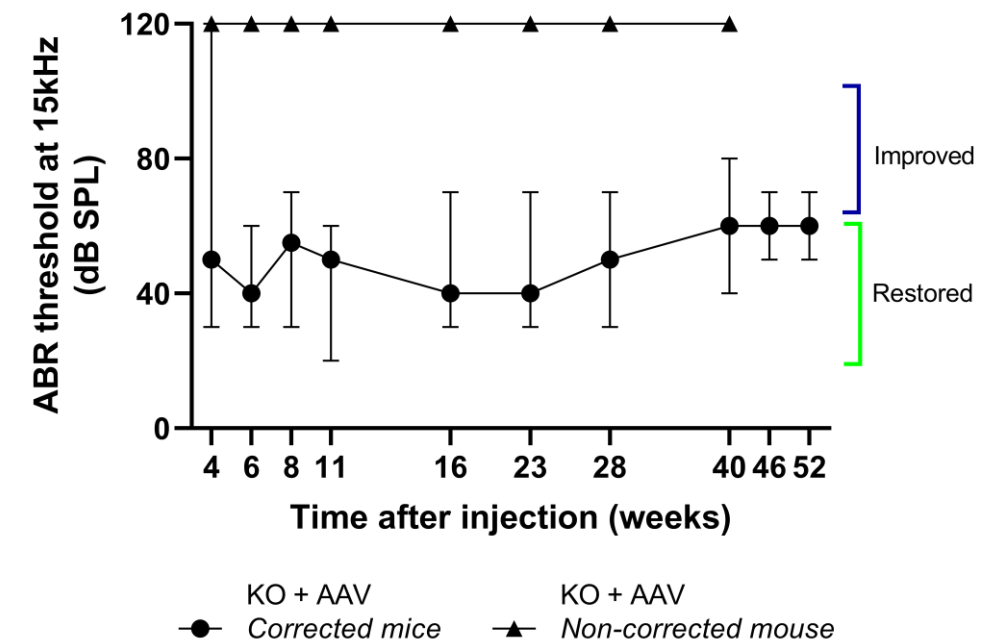
# Dual AAV-OTOF Resulted In IHCs Specific Expression And Hearing Restoration In DFNB9 Mice

## Target cell specific protein expression



- Dual AAV-OTOF injection into the cochlea leads to **IHC specific de novo otoferlin protein expression**

## Hearing restoration in DFNB9 mice



- **Durable hearing restoration** in *Otof*<sup>-/-</sup> mice by dual AAV-OTOF directly delivered to the inner ear up to one year post-injection

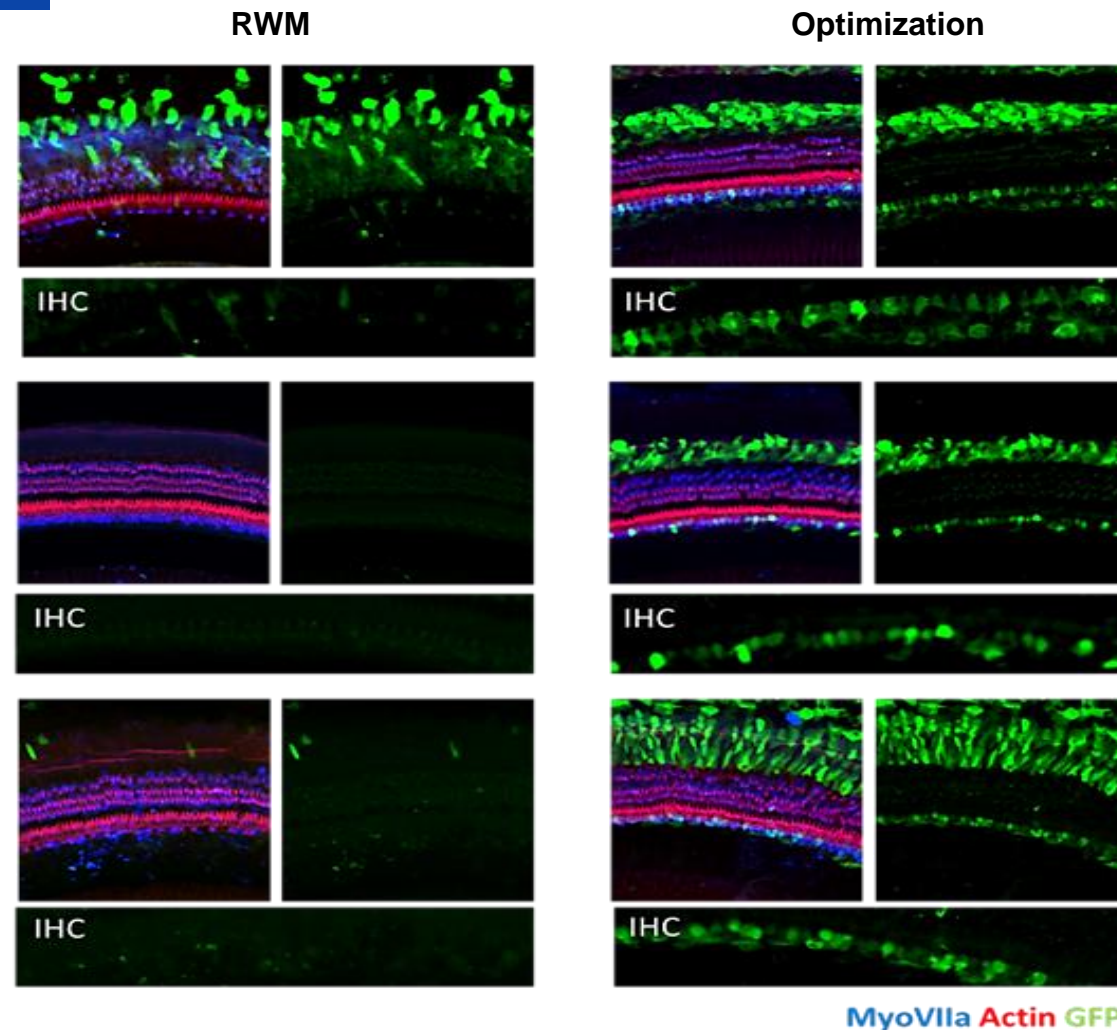
Lahlou et al. ARO 2022 [link](#)



# Optimized Surgical Procedure Leads To IHC Specific AAV-delivered Transgene Transduction In Mature NHP Cochlea

## AAV vector distribution in cochlea of NHP

- Delivery of the AAV transgenes to **IHCs and not OHCs** in NHP
- **High transduction efficiency** with more than 50% IHCs along the tonotopic axis in mature NHP cochlea
- **No correlation** between anti-AAV neutralizing antibodies (measured in blood before injection) and the average of GFP<sup>+</sup> cells



## Surgical approach

- Surgical procedure is **similar to cochlear implantation** and well mastered by ENTs surgeons
- Optimized surgery uses **stapedotomy procedure** to maximize target cells exposure along the full length of the tonotopic axis
- **New injection system** device under development

Lahlou et al. ARO 2022 [link](#)

# Otoferlin “Audinnove” Consortium Provides Privileged Access To Patients And Surgeons

## Audinnove consortium received Hospital-University Research (RHU) prize:

- The consortium is eligible to receive up to €9.7m to develop a Gene Therapy program addressing otoferlin deficiency
- Audioferlin: Natural History Study: clinical evaluation and selection of patients
- Database compilation with genotypic and phenotypic characterization of children with congenital hearing loss
- Phase 1/2 Gene Therapy study (financing up to 1st patient in the clinical study)

Audinnove consortium is key to the understanding of the epidemiology and to build awareness of the emerging gene therapies

## Necker-Enfants Malades Hospital

- The first dedicated pediatric hospital in the world

The Reference Center for Genetic Deafness at Necker coordinates the French and European genetic deafness networks



Audinnove is financed by the French State, via the National Research Agency through the “Investing for the future” program (ref: ANR-18-RHUS-0007)

## OTOCONEX: expanding the Natural History Study across Europe

## AUDINNOVE CONSORTIUM MEMBERS



# OTOF Gene Therapy Program Status – Progressing On Track

POC data in mouse & POC preliminary data in NHPs



Submission of European Natural History Study OTOCONEX



Product development and manufacturing agreement



Delivery of batches for toxicology study mid-2022



Advice from regulatory authorities



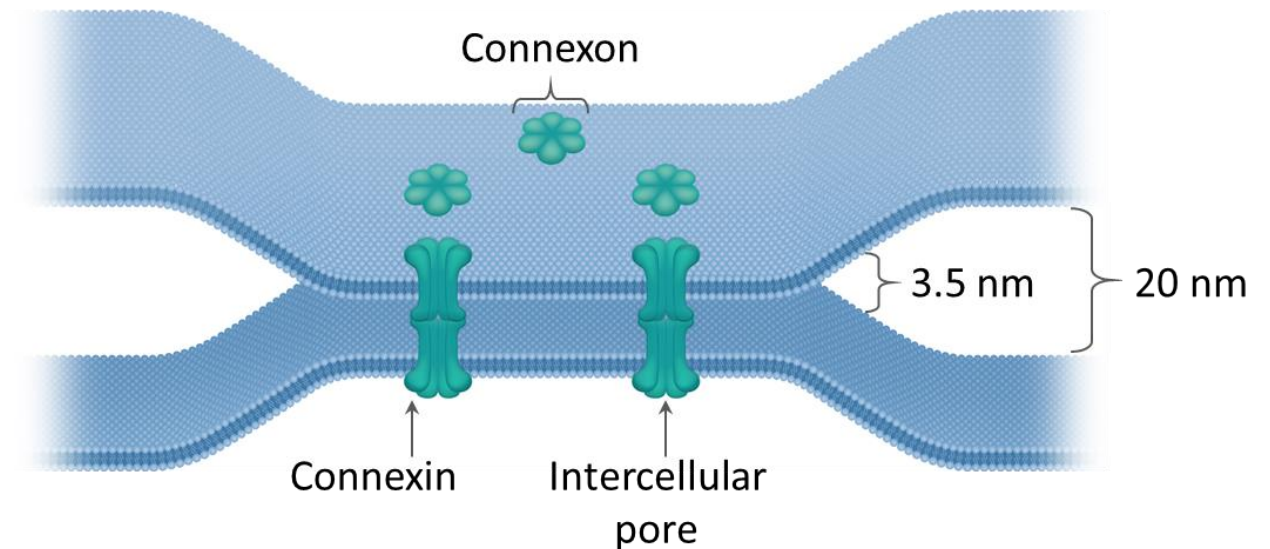
Clinical Trial Application Q2 2023



# Connexin 26: A Gap-junction Protein Encoded By *GJB2* Gene and Responsible for Tissue Homeostasis

## Mutations in the Gene Lead to Deafness

- ***GJB2*** is the gene encoding for the **Connexin 26** protein; one of 20 known connexins in humans and almost endemic to the cochlea (together with Cx30); **a hexamer of 6 proteins forms Gap Junctions**
- Gap Junctions are **key for the intercellular exchange of molecules** (miRNA, glucose, ions, etc.) hence responsible for **tissue homeostasis**
- *GJB2* cDNA = 681 bp compatible with the use of a **single AAV**
- More than 100 recessive mutations origin Cx26 truncation / deletion leading to non-syndromic hearing loss and deafness
- *GJB2* mutations are the **most prevalent form of congenital deafness** (DFNB1)
- Children are usually **diagnosed during routine newborn screening** and current SoC is cochlear implantation prior to language acquisition
- Prof. Christine Petit observed in an epidemiology study that some patients demonstrating early onset of **severe presbycusis** carried *GJB2* mutations<sup>[1]</sup>



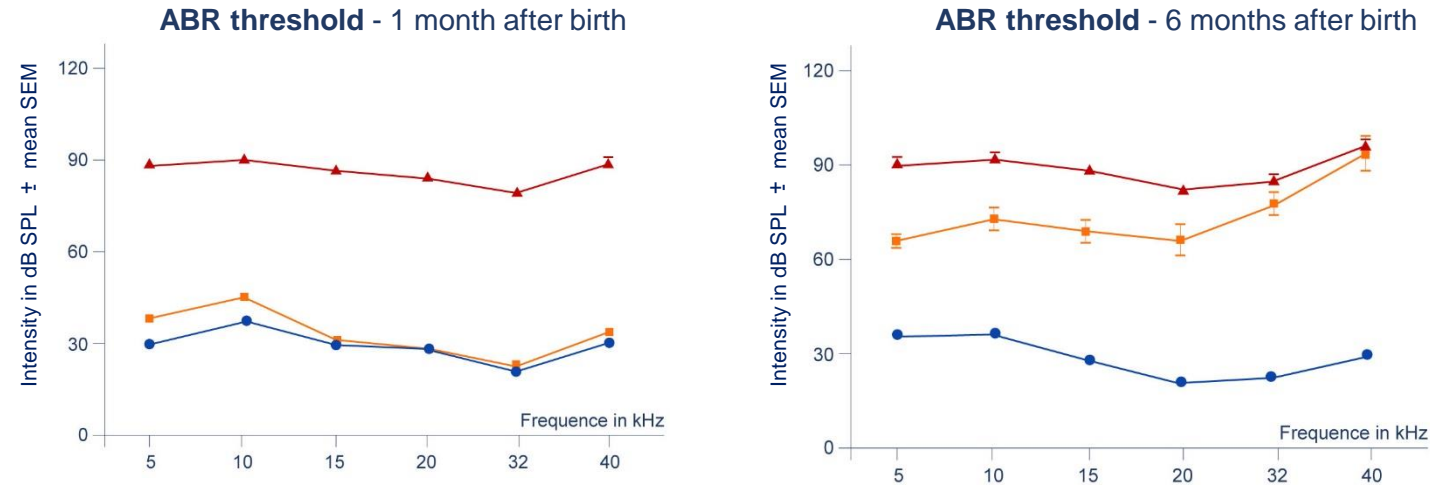
*Schematic representation of a gap junction – adapted from Kemperman, Hoefsloot and Cremers J R Soc Med 2002;95; 171-177*

[1]: Boucher et al. 2020

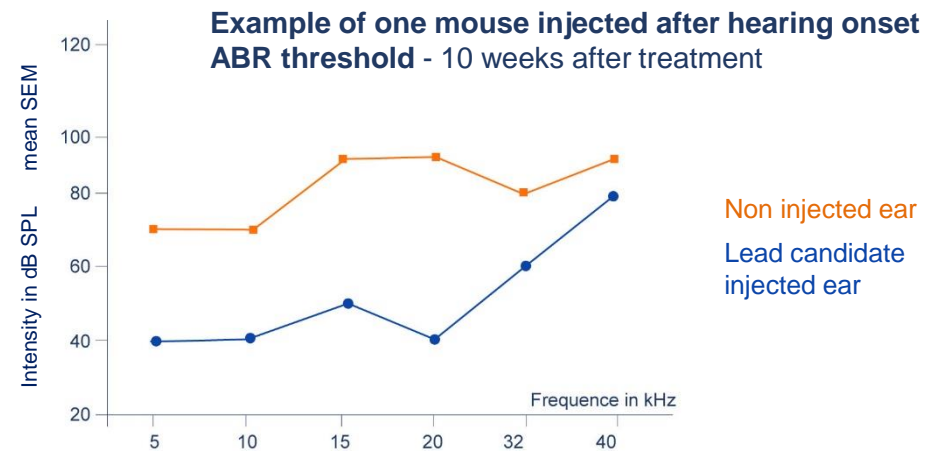
# Candidate Selected Prevents Hearing Loss in Relevant Mouse Model

## PROOF OF CONCEPT IN PROGRESSIVE MOUSE MODEL

Conditional knock-out mouse model leading to 2 phenotypes



Control mice    Congenital-like Profound Cx26 ↓ ↓ ↓    Progressive Cx26 ↓

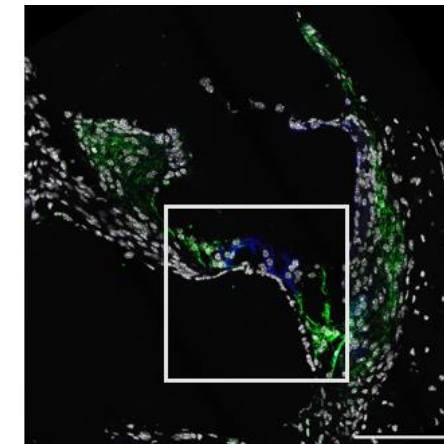


Non injected ear  
Lead candidate injected ear

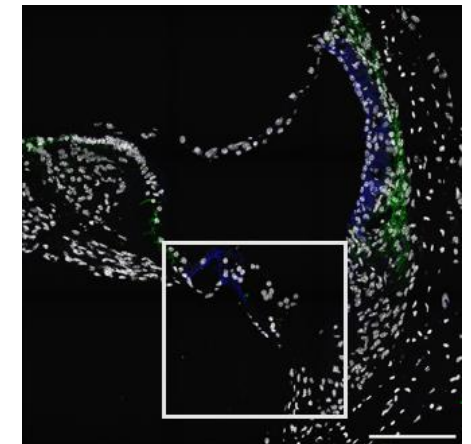
## HEARING LOSS PREVENTION CORRELATES WITH CONNEXIN 26 EXPRESSION

Example of one mouse injected after hearing onset  
Connexin 26 expression in the cochlea  
- 10 weeks after treatment

Lead candidate injected ear



Non injected ear



Left: Green staining demonstrates efficient Cx26 re-expression in target cells, which are otherwise depleted (right) in Cx26 in the GJB2 deficient model



# GJB2 Gene Therapy Program Next Steps

Submission of European Natural  
History Study OTOCONEX



Submission of Natural History Study  
in collaboration with Sonova



Candidate selection Q2 2023



Preclinical IND enabling studies









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# **SMALL MOLECULE PROGRAMS**

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# SENS-401: Multiple Indications To Treat And Prevent Hearing Loss

	Product	Indication	Discovery	<i>In vivo</i> POC	Preclinical	Phase 1	Phase 2	Phase 3
PREVENT	SENS-401	Hearing preservation after cochlear implantation						
	SENS-401	Cisplatin Induced Ototoxicity						
TREAT	SENS-401	Sudden Sensorineural Hearing Loss*						

*\*"Patriot" Consortium (IRBA, Sensorion, Echodia, Institut Pasteur) awarded up to €10.8m non dilutive financing by French government, staged over the duration of the project. Sensorion will receive up to €5.6m to further develop SENS-401 in SSNHL French army*

# SENS-401 - A Portfolio With Potential Blockbuster Value



SENS-401 SSNHL clinical data and insight **derisk** further development of SENS-401 in other indications

# Sudden Sensorineural Hearing Loss (SSNHL) Is A Severe Disease Affecting More Than 200,000 Patients Per Year

## WHAT IS SSNHL?

**The sudden onset of a significant hearing loss due to dysfunction of the cells of the cochlea and central auditory structures.**

Hearing loss develops over less than 72 hrs, hearing sensitivity is reduced by at least 30 dB (1,000 fold) in the affected ear(s).

>70% of cases are idiopathic, known causes include noise/head trauma, ischemia, infection.

>50% of patients suffer from permanent disabling hearing loss, mostly those with initial severe/profound hearing loss.

**Complications significantly impact quality of life due to:**

- Difficulties in communicating, social isolation, cognitive decline
- Accompanying tinnitus

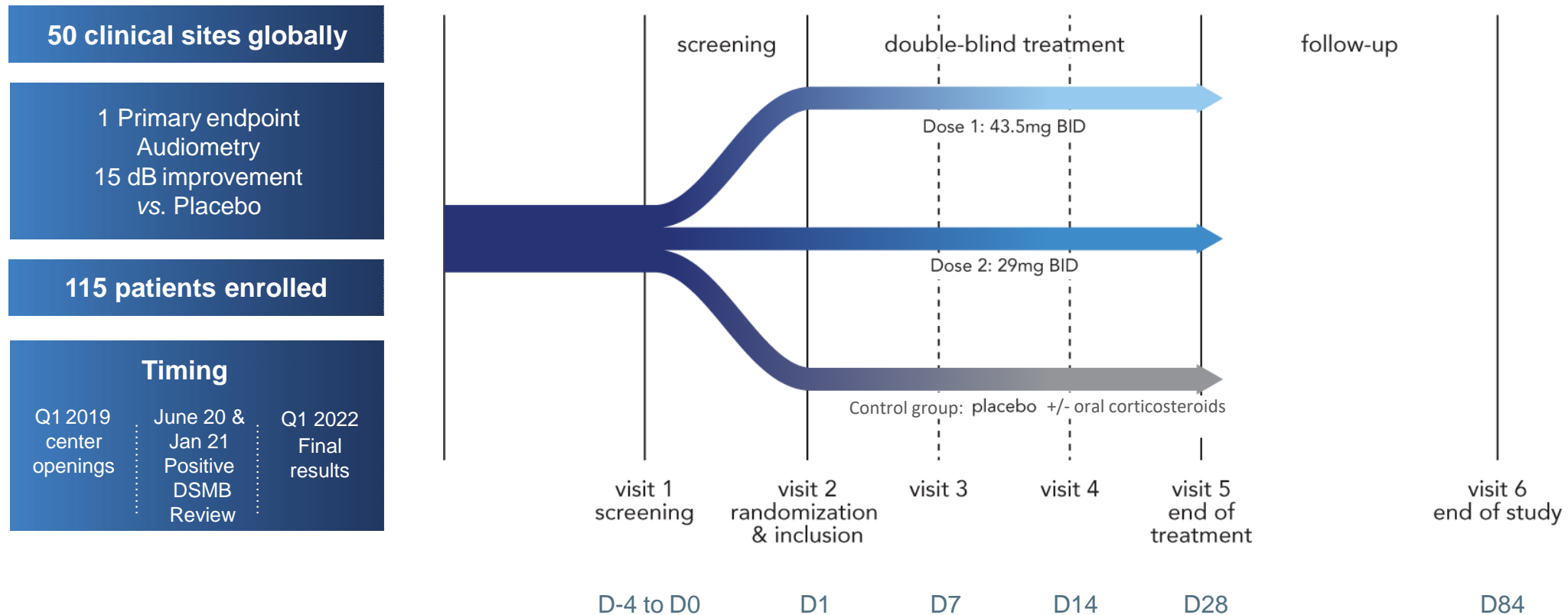
**Incidence:** 27-35 per 100,000 (218,000 patients in 2017 in G7 countries)<sup>1</sup>

<sup>1</sup> Company/ estimates based on publicly available data (in the US, Japan, Germany, France, the UK, Italy and Spain)



# SENS-401 SSNHL Program: Phase 2 Design

A RANDOMIZED, MULTICENTER, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

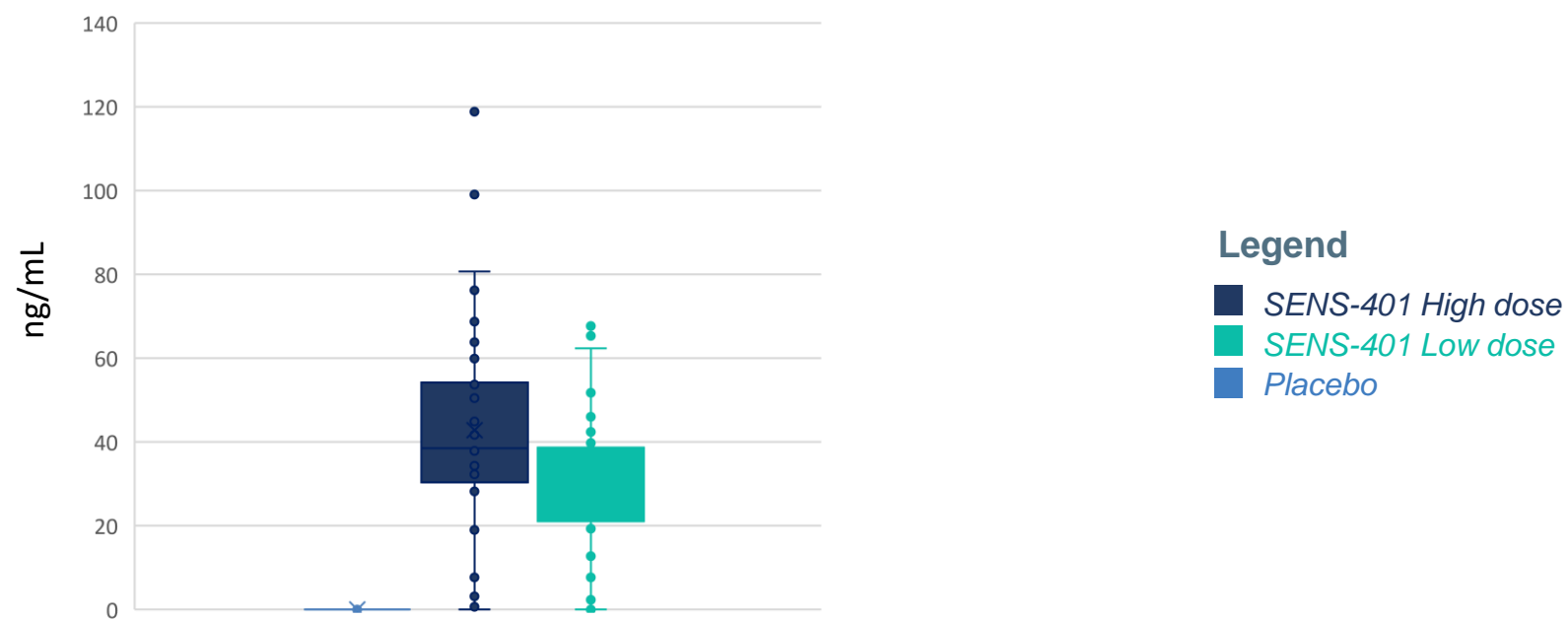


## Primary endpoint definition:

“...change in pure tone audiometry (PTA); average of the hearing threshold of 3 contiguous most affected hearing frequencies in decibels in the affected ear from baseline to the end of treatment visit (Visit 5/D28±3)”

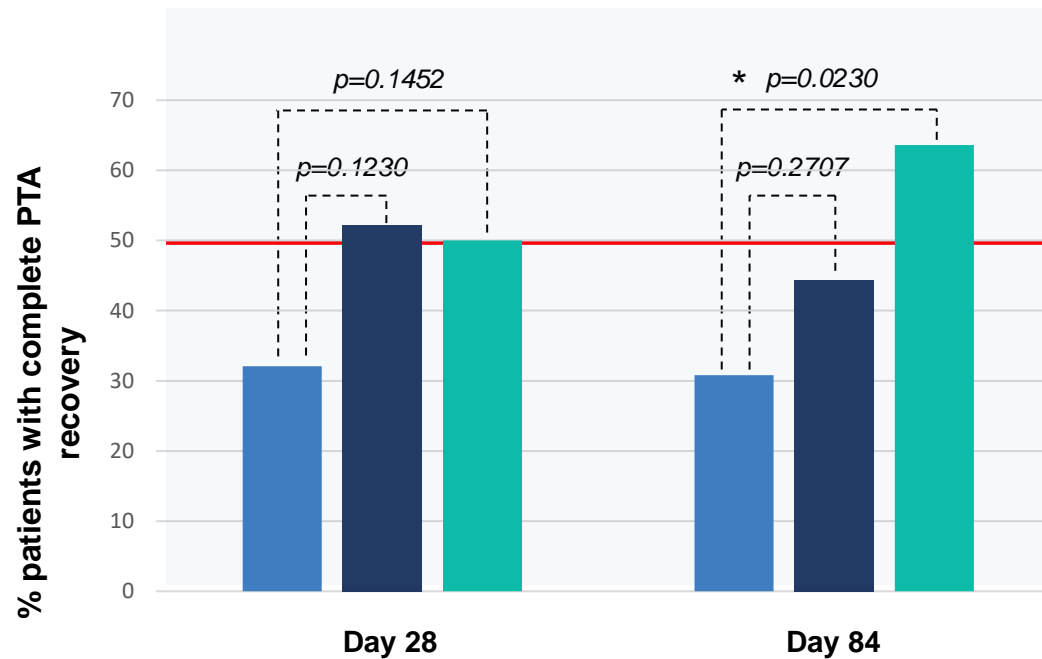
# SENS-401 Plasmatic Exposure

Plasmatic concentration (Pre-dose at Day 14 and Day 28)



# SENS-401 Induces Complete PTA Recovery In 50% Of Patients

## Complete PTA recovery



Complete PTA recovery (n/n total)	Placebo	High Dose	Low Dose
Day 28	9/28	12/23	13/26
Day 84	8/26	8/18	14/22

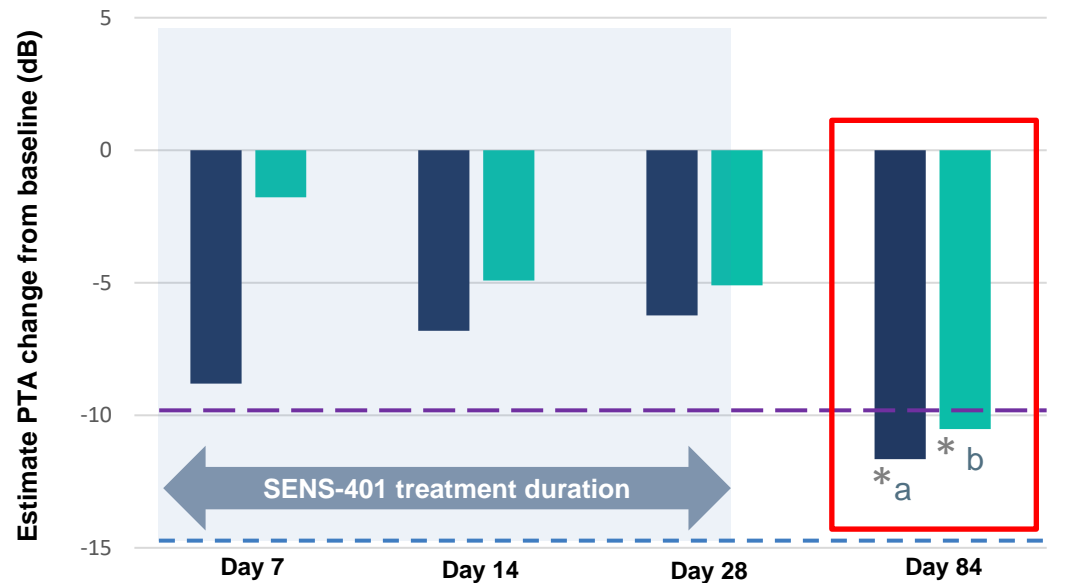
### Legend

- SENS-401 High dose
- SENS-401 Low dose
- Placebo

- **Complete hearing recovery** is defined as patients with hearing loss at baseline who will revert to PTA < 20 dB, considered as “normal” hearing.

# Although Primary Endpoint Not Met, Data Supports And Informs Further Clinical Development

## PTA improvement from baseline compared to placebo on per protocol idiopathic SSNHL



### Legend

- SENS-401 High dose vs Placebo
- SENS-401 Low dose vs Placebo

- **Statistically significant effect** on PTA change with more than 10 dB change from baseline vs placebo observed over time in homogeneous idiopathic population of patients treated with corticosteroids.

	Day 7	Day 14	Day 28	Day 84
High dose	N= 21	N= 23	N= 22	N= 17
Low dose	N= 26	N= 26	N= 26	N= 21
Placebo	N= 25	N= 28	N= 27	N= 25

### Primary analysis

Comparing SENS-401 treatment groups to Placebo at **Day 28** with a **target of an improvement of 15 dB**.

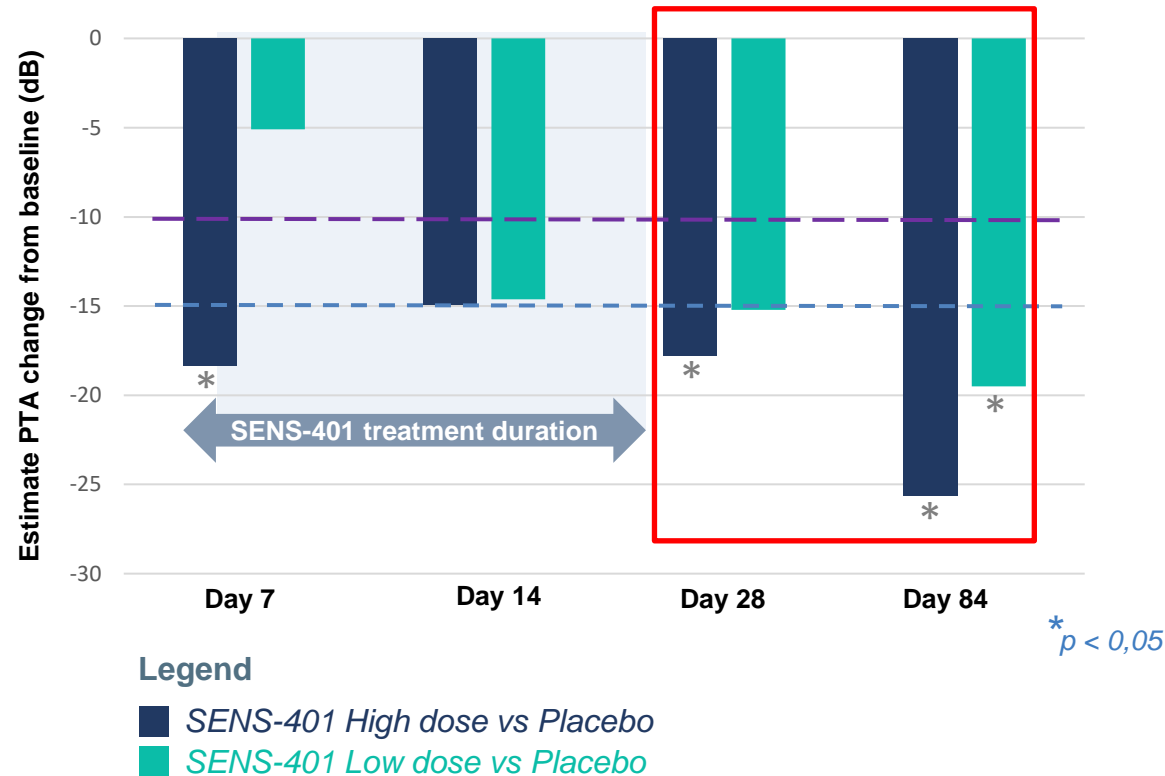
**10 dB change from baseline** considered as clinically meaningful.

### Sub-population

Homogeneous idiopathic population of patients treated with corticosteroids.

# SENS-401 Effect Is More Pronounced In A Profound Hearing Loss Sub-group (PTA $\geq$ 80 Db)

## PTA improvement from baseline compared to placebo



	Day 7	Day 14	Day 28	Day 84
High dose	N= 11	N= 11	N= 9	N= 9
Low dose	N= 11	N= 11	N= 9	N= 9
Placebo	N= 14	N= 15	N= 15	N= 13

### --- Primary analysis

Comparing SENS-401 treatment groups to Placebo at Day 28 with a **target of an improvement of 15 dB**.

--- 10 dB change from baseline considered as clinically meaningful.

### Sub-population

Homogeneous idiopathic population of patients with profound hearing loss (PTA  $\geq$  80 dB) treated with corticosteroids.

- SENS-401 induces a **significant PTA change of at least 19 dB at day 28 and up to 25 dB at Day 84** allowing a reduction of the hearing loss degree **from profound to mild hearing loss**.
- A better response was observed in both treatment groups with a **continuous improvement between Day 28 and Day 84**.

# SENS-401 SSNHL Phase 2 Results Summary

## *Seeking Partners For Late-Stage Development And Commercialization*

### AUDIBLE-S SECONDARY ENDPOINT RESULTS

- Complete PTA recovery is achieved in 50% of the SENS-401 treated patients
- SENS-401 shows a **clinically meaningful and statistically significant effect on PTA change over time** in a **large homogeneous idiopathic population of patients treated with corticosteroids**
- SENS-401 induces a **significant PTA change of at least 19 dB at day 28 and up to 25 dB at Day 84** allowing a **reduction of the hearing loss degree from profound to mild**
- The change in PTA translates into functional improvement evidenced with speech audiometry tests
- Safe and well tolerated in 115-patient SSNHL study; primary endpoint not met
- **Responder rate is always better in the treated group** compared to Placebo and difference with Placebo increases over time



# Cisplatin Administration for Chemotherapies Damages the Inner Ear and Leads to Hearing Loss, Tinnitus and Dizziness

## WHAT IS CIO?

**Hearing loss caused by cisplatin administration as chemotherapeutic treatment.**

Risk factors include young age as well as individual and cumulative cisplatin doses.

CIO leads to permanent inner ear problems in 50-60% of adult cases and in 90% of pediatric cases.

**These complications significantly impact patients' quality of life due to:**

- Hearing loss, tinnitus and dizziness impacting daily life activities
- Problems in language acquisition and learning for pediatric patients
- Difficulties in communicating, social isolation, cognitive decline

Potential treatments must not interfere with cisplatin efficacy.

**Incidence of cisplatin treated patients:** 500,000 patients in 2025 in G7 countries<sup>1</sup>



<sup>1</sup> Company/ estimates based on publicly available data (in the US, Japan, Germany, France, the UK, Italy and Spain)

# SENS-401 Phase 2a Proof-of-Concept Study

## First Data Expected H2 2023

A Phase 2a, Multicenter, Randomized, Controlled, Open-label Study to Evaluate the Efficacy of SENS-401 to Prevent the Ototoxicity induced by Cisplatin in Adult Subjects with a Neoplastic Disease

### SCREENING PERIOD (between -28 and -2 days)

Subjects suffering from a neoplastic disease for which the treatment protocol includes a chemotherapy with cisplatin and having a higher risk of ototoxicity induced by the cisplatin treatment

(about 58 subjects)

### RANDOMIZATION

Arm A - Up to 29 subjects

Arm B - Up to 29 subjects

#### Objectives:

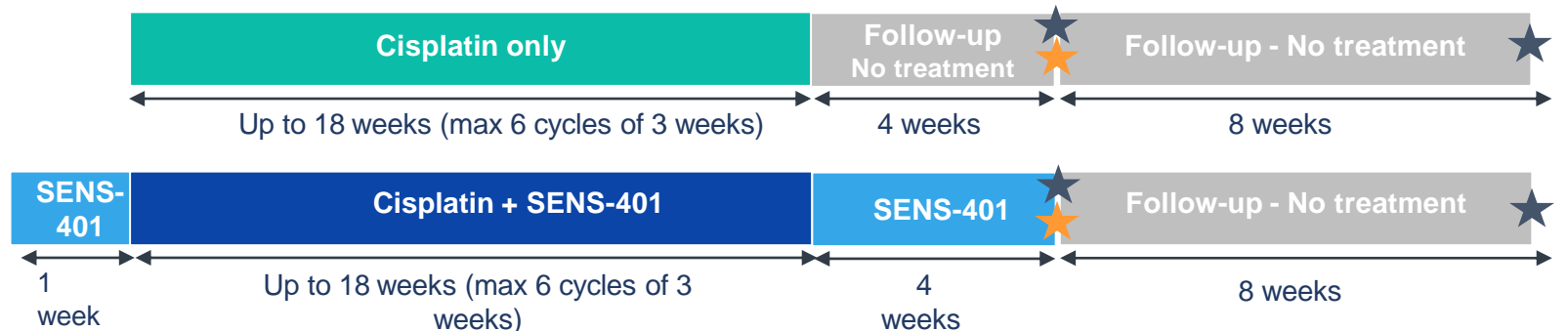
##### Efficacy

- Rate of ototoxicity
- High Frequency PTA
- Speech in Noise and quiet
- THI questionnaire

##### Safety

- AEs & SAEs incidence

### STUDY DURATION (max 31 weeks)



★ Primary Endpoint

★ Secondary Endpoint

# SENS-401 To Preserve Residual Hearing After Cochlear Implantation

## COMBINATION OF COCHLEAR IMPLANT WITH SENS-401 TO PREVENT CELL-DEATH POST COCHLEAR IMPLANT PROCEDURE

### HEALTHY AGEING

Growing understanding of the link between healthy hearing and healthy ageing



Cognitive decline



Isolation



Depression



Ability to work



Falls



Loss of independence

Source: Cochlear® 2018 investor day ([link](#))

### KEY FIGURES

**36,450**

Implants sold by Cochlear® globally in 2021<sup>1</sup>  
(representing ~60% of global market share)

**\$1.5bn**

Cochlear implant market in 2020<sup>2</sup>

**80%**

Market penetration in children in developed  
markets<sup>1</sup>  
and 3% in adults<sup>1</sup>

<sup>1</sup>Cochlear® FY21 Result Presentation ([link](#))

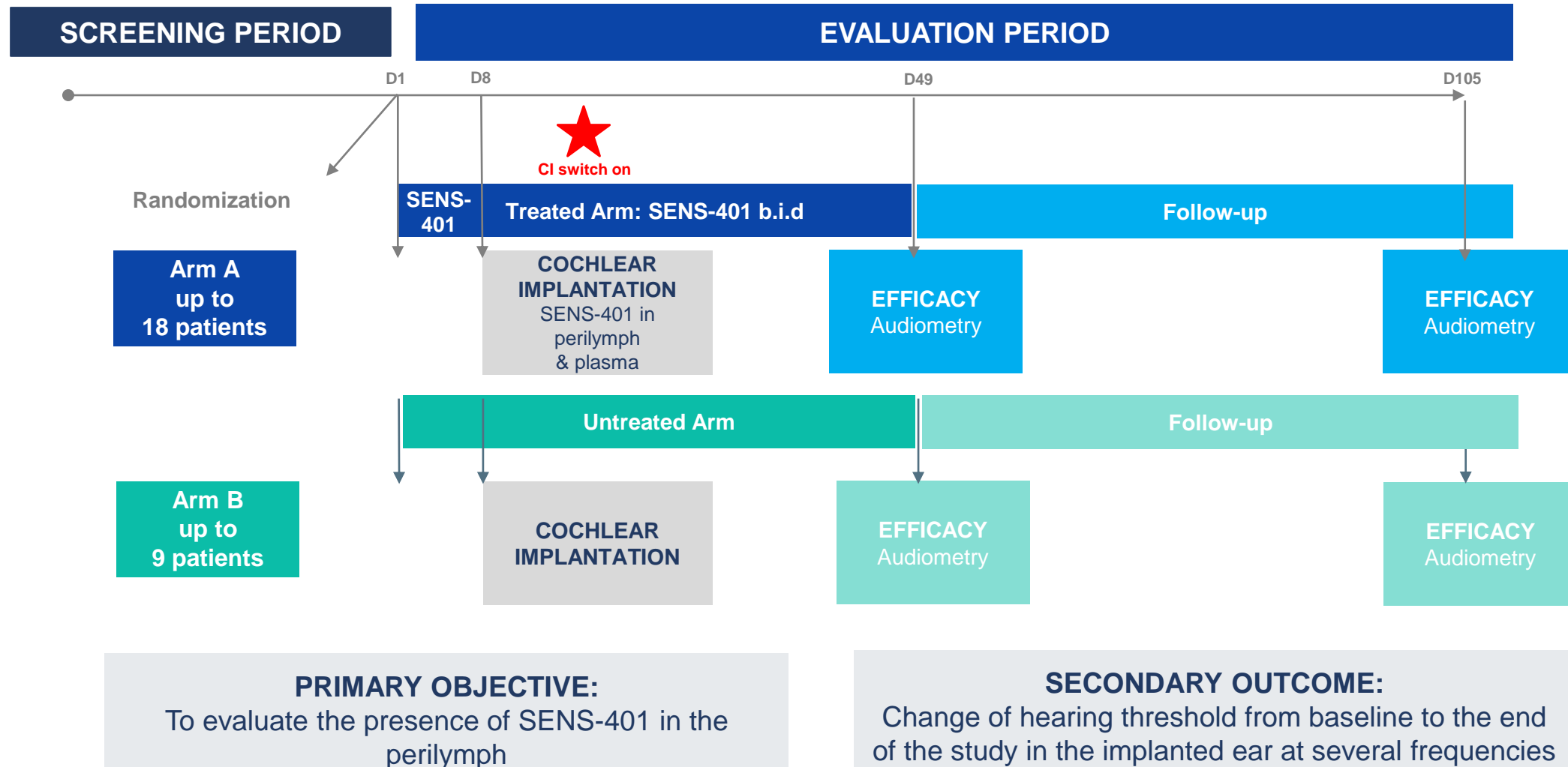
<sup>2</sup>Market estimates ([link](#))

# SENS-401 Study Commenced In Sept. 2022

## First Data Expected Mid-2023



A Phase 2a, Multicenter, Randomized, Controlled, Open-label Study



# SENS-401 Program Key Milestones, Data Readouts Mid 2023

SENS-401 CIO NOTOXIS CTA  
amendment approved Oct 2022



First patient enrolled in SENS-401  
CIO NOTOXIS Dec 2022



SENS-401 combo with cochlear implants  
- preliminary results mid 2023



SENS-401 CIO NOTOXIS  
- preliminary results H2 2023



# Sensorion Newsflow [estimated timelines]

- Mid-2022 – OTOF-GT: delivery of batches for toxicology study ✓
- H2 2022 – OTOF-GT: EMA's positive opinion for ODD ✓
- H2 2022 – SENS-401 CIO: NOTOXIS CTA study amendment approval ✓
- H2 2022 – OTOF-GT: FDA approval for RPDD ✓
- H2 2022 – OTOF-GT: FDA approval for US ODD ✓
- April 6, 2023 – Sensorion to host a Gene Therapy R&D day ✓
- Q2 2023 – GJB2-GT: candidate selection ✓
- Q2 2023 – OTOF-GT: submission of the Clinical Trial Application (CTA)
- Mid-2023 – SENS-401 in combination with cochlear implantation: preliminary results
- H2 2023 – SENS-401 CIO: NOTOXIS preliminary results



# THANK YOU



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