

## **French SME providing auditory preclinical efficacy and safety studies is looking for services agreement with life-sciences industries to accelerate the development of novel therapies**

**Technology offer - POD reference: TOFR20220517008**

**Short summary** - Based in France, US & Denmark, the French SME is the one-stop partner for pharma, biotechs & medtechs developing novel therapies for people with hearing disorders. The company's mission is to give hope to the 466M people worldwide waiting for effective solutions. The company offers pharmacokinetics, efficacy, ototoxicity studies, & consulting, to assess drugs, devices, cell & gene therapies on hearing loss, tinnitus, & otitis under commercial or research agreements.

### **Full description**

The French SME is a preclinical provider in otology, uniquely qualified in the functions of the ear, a complex sensory organ which remains under-explored. Established in France, US & Denmark, the company has state-of-the art laboratories, research experts in otology and neurosciences, as well as a global network of partners. The company started operating in 2014 and is born to accelerate R&D in hearing disorders. 20% of the world adult population has some degree of hearing loss, reaching one out of three people aged over 65. The prevalence is dramatically increasing worldwide and the World Health Organization forecasts that 2.5 billion people will suffer from hearing loss in 2050. Aging populations, excessive noise exposure, ototoxic drug intake and chronic ear infections are the main risk factors driving this global health concern.

The company core value is built on the existence of a unique laboratory platform with innovative and validated pharmacological models reducing time to proof of concept. Its additional value comes from the large industrial background of the team and its capacity to drive drug development strategy from research to market authorizations, including writing of international development plans and regulatory documents.

The company supports research & development of drugs, medical devices, gene & cell therapies and offer the following services to pharmaceutical & nutraceutical industries, biotech, medtech, and academics:

Preclinical efficacy and safety studies:

- In vitro screening on otic cell lines
- Ex vivo studies on cochlear explants
- Pharmacokinetics studies with inner ear fluid samplings, systemic and local administration
- In vivo efficacy studies in validated and robust animal models (rodents or large animals): age-related hearing loss, noise-induced hearing loss, drug-induced ototoxicity, salicylate-induced tinnitus, otitis
- Tolerance studies to check safety of compounds on the inner ear
- GLP (Good Laboratory Practice) compliant ototoxicity studies in rodents and large species

Read-outs:

- ABR (Auditory Brainstem Responses), wave I analysis
- DPOAE (Distortion Product OtoAcoustic Emissions)
- GPIAS (Gap Prepulse Inhibition of Acoustic Startle Reflex) to detect tinnitus
- Histology with Cochleogram, ribbon synapses and SGN (Spiral Ganglion Neurons) count
- Scanning Electron Microscopy, Imaging, electrophysiology

The company offers also auditory non-clinical safety studies related to the sanitary crisis as multiple drugs currently tested for Covid-19 are on the list of the ototoxic agents. Their intake may be associated to hearing loss, tinnitus, and balance disorders.

The SME is the world leading contract research organization dedicated to ear disorders and has performed more than 200 studies for more than 90 clients worldwide, mainly for North America, Europe, Japan, and South Korea. To further extend its development, the company is looking for services agreements to continue its mission of accelerating R&D of novel therapies to prevent and treat hearing loss, tinnitus, and otitis.

### Advantages and innovation

The French SME is the pioneered R&D services company specialized in the field of hearing. Its main advantage is that it covers the full preclinical development phase of a drug, from in vitro to GLP ototoxicity studies, in comparison to its competitors which usually are multi-services Contract Research Organizations.

Moreover, the company has the technology to measure hearing thresholds in 8 animals at the same time which gives a very high throughput and allows to be very rapid in the study conduct.

The company is established in France and in the US with facilities in both countries.

The expertise of the company is now recognized worldwide by its clients: it is an unmatched expertise from its experienced team of experts in otology and neurosciences, mainly doctors and engineers.

The services of the company are at the forefront of research and innovation: the SME collaborates with private and public actors to create novel models

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### Partner sought

Pharmaceutical industries, biotech & medtech companies, nutraceutical and veterinary industries, academics, aiming at:

- Screening a large number of compounds for ototoxicity or efficacy in hearing loss
- Repurposing assets in hearing indication
- Testing efficacy of compound, medical device, gene and cell therapy on a preclinical model of hearing loss, tinnitus or otitis
- Testing safety of compound in a GLP-compliant ototoxicity study

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Depending on the need of the potential partner regarding the testing on its compounds or formulations, the company proposes either commercial agreements with technical assistance or research cooperation agreements.

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#### Type of partnership

Commercial agreement with technical assistance

Research and development cooperation agreement

#### Type and size of the partner

Big company

SME 50 - 249

SME 11-49

SME <=10

R&D Institution

Other

University