

Partnering Opportunity

Profile status : Expired

Technology Offer

A French SME offers to biotech and pharma industries services or co-research based on analysis of microtubule cytoskeleton in the field of neurodegeneration

Summary

A French biotechnology start-up develops novel solutions to treat neurodegeneration, a process linked with microtubule disorders. It develops compounds to restore microtubule stability in glaucoma and thus secured assets and has become expert in microtubule analysis in various models and pathologies. Its expertise in R&D may be provided as services, research agreements for co-development or technical agreements where the company is included as a partner in a grant application consortium.

Reference TOFR20201023001

Details

Description

In view of the ageing population in the EU, finding novel therapies for age related disorders remains a priority challenge.

A French company develops compounds to restore microtubule stability in glaucoma and pursues the preclinical development of its assets with the objective to bring an innovative therapeutic product in the space of ophthalmology to clinical stage. Its assets and know-how are related to a recently identified therapeutic target.

Glaucoma is the result of neurodegeneration of the ganglionic cells of the optical nerve where dissociation of the microtubule associated protein tau from microtubules, was recently shown to be linked to the degenerative process. While current pharmaceutical efforts focus on restoring tau properties, therapeutics that target the enzymes modifying the microtubules, have so far never been explored. In turn, the company pursues the development of compounds to prevent tau dissociation and restore its binding to microtubules.

Based on breakthrough discoveries, proprietary technologies, the French company has generated first-in-class compounds that specifically target microtubule modifying enzymes to promote neuroprotection. The novel

compounds that have been developed are aimed to halt the process of neurodegeneration within the optic nerve, by restoring microtubule biology known to be altered at early stages of the disease.

The company is willing to provide to partners and clients research deliverables where the study of microtubule biology adds a great added value to their research and development operations. For example, it is well established that microtubules are an important parameter in diseases such as cancer, cardio-pathologies, ciliopathies and neurodegeneration. Its goal is to provide in depth, high quality data related to cytoskeleton read-outs. In turn, key parameters ranging from cytological, histological, biochemical and in vitro can be analyzed to further understand the efficacy of given treatments. Furthermore, toxic effects on microtubules can be determined on multiple parameter analysis.

Non-exhaustive list of operations that can be provided:

- Cytological analysis of the microtubule cytoskeleton by multiple methods such as imaging and biochemistry to determine how microtubule stability, modifications, trafficking "reacts" in pathology, toxic exposure, drug or other treatments.
- In vitro assays of microtubule stability.
- Tailored development of desired assays for any microtubule-based studies.
- Microtubule cytoskeleton toxicity assays that are predictive of in vivo assays.
- Screening methods using proprietary biochemical method.
- Histological analysis of multiple microtubule parameters in pre-clinical or in clinical tissues
- Mechanistic studies of drug effects in either research and development, or pharmacokinetics and pharmacodynamic studies in clinical trials.

The value proposition may be provided to biotech SMEs and pharma industries as services, research agreements for co-development or technical agreements where the company is included as a partner in a grant application consortium.

Advantages and innovations

The company proposes reliable, quality controlled and tracked research deliverables based on microtubule biology in a timely manner.

The comparable identified are academic research laboratories that focus on their own research and projects. As such the company's value proposition is to deliver to the client or partners tailored studies.

The advantages can be listed as follows:

- Specialized and well-trained team
- Differentiated know-how
- Strong scientific and technologic background
- Proprietary screening methodology
- responsiveness
- Fast obtention of results

Stage of development

Prototype available for demonstration

Partner Sought

Type and Role of Partner Sought

Biotech SMEs and pharma industries that are seeking clinical relevance, mechanistic understanding of diseases or efficacy of treatments where microtubule biology is critical (such as neurodegeneration, oncology, cardio pathologies, ciliopathies) are encouraged to contact the company.

The company's research and development assets may be provided as services, or research agreements for co-development or technical agreements where the company is included as a partner in a grant application consortium.

Type and Size of Partner Sought

SME 11-50, SME <10,>500 MNE, 251-500, SME 51-250,>500

Type of Partnership Considered

Commercial agreement with technical assistance
Technical cooperation agreement
Research cooperation agreement