

Breaking the barrier

French biotech company VECT-HORUS recently signed a scientific collaboration agreement with SANOFI. The agreement with a global leader in the biopharmaceutical industry reflects the growing interest in their drug delivery platform based on peptide-vectors, and more widely the potential of their approach to facilitate the addressing of diagnostic and therapeutic molecules to different organs and particularly to the brain, says Alexandre Tokay, co-founder and CEO of VECT-HORUS.

VECT-HORUS, a spin-off of the laboratory of Michel Khrestchatsky (CNRS), co-founder of and currently scientific adviser to the company, has developed vectors allowing therapeutic substances to be delivered to the brain via natural receptors within the blood-brain barrier (receptor-mediated transcytosis). The idea is to bind these molecules to peptides that are themselves able to bind to receptors within the blood-brain barrier, explains Mr. Tokay. First established in 2005, the first stage for VECT-HORUS involved selection of the most relevant target receptors followed by screening of peptide libraries with regard to these targets. Five years ago, work began in earnest as the Marseille-based company began to seek industrial partners

wishing to use its peptide vectors, or Trojan horses, which are designed to carry drugs used in the treatment of central nervous system diseases across the blood-brain barrier.

The recent signing of a scientific collaboration agreement with SANOFI is an important milestone in that regard, says Mr. Tokay. The goal of this collaboration is to use VECT-HORUS' proprietary technology to transport therapeutic antibodies into the brain for the treatment of a neurodegenerative disease. "We are very pleased with the signing of this agreement and convinced that this research collaboration will be fruitful for both parties and will open new avenues in the treatment of neurodegenerative diseases." The agreement with SANOFI is part of VECT-HORUS' framework strategy,

which is to use its proprietary technology to enter into R&D agreements with biopharmaceutical companies to generate patentable new chemical entities, based on the vectorisation of their drug candidates.

Neurodegenerative and CNS diseases in general represent a high unmet medical need and already the second largest therapeutic market, in spite of the fact that there is still no cure or efficient treatments to tackle them. The inability to transport drugs across the BBB has so far been a major hurdle to developing effective treatment, says Mr. Tokay. The scientific approach of VECT-HORUS is based on the principle that the BBB is not only a physical barrier that must be crossed, but also a functional barrier whose natural transport mechanisms may be advantageously used to deliver drugs into the brain.

While VECT-HORUS is not the only company in the world working on drug delivery across the blood-brain barrier, there is little competition, with only a handful of companies present in this market. Mr. Tokay in fact believes that companies who focus on this space are potential future allies, rather than competitors, with technologies that complement that of VECT-HORUS.



VECT-HORUS S.A.S.

Faculté de Médecine Nord

51 Boulevard Pierre Dramard

13344 Marseille Cedex 15

France

Website: www.vect-horus.com