Method enables blood-brain barrier repair in neurological disorders

18 February 2022

An impressive number of brain pathologies are closely linked to major cerebrovascular defects, which are currently impossible to treat due to a lack of drugs. The discovery by researchers from the ULB Neuroscience Institute is therefore particularly promising, as not only have they developed a new class of molecules that specifically correct these dysfunctions, they have also demonstrated their effectiveness in mouse models of radically different brain pathologies.

"One of the most fascinating aspects of this study is the level of specificity with which pathological brain vessels respond to this experimental treatment. Inspired by the natural developmental process, we have designed a new class of molecules that are able to reach their therapeutic target efficiently, while remaining completely inert for healthy vessels and other tissues of the body. On a fundamental basis, this level of specificity seemed a priori out of reach," explains Benoit Vanhollebeke.

To build on this, the researchers from the Neurovascular Signalling Laboratory now want to explore other experimental models of brain pathologies that could potentially benefit from their approach.

Benoit Vanhollebeke and the ULB have created the
spin-off company NeuVasQ Biotechnologies, which, with the support of a consortium of public and private investors, aims to bring this type of neurovascular treatment to the bedside.


Provided by Université libre de Bruxelles


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