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PRESS RELEASE

Dutch biotech company to-BBB and Taiwanese ITRI sign exclusive license agreement

NEW TECHNOLOGY OPENS GATEWAY TO TREATMENTS OF BRAIN DISEASES

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to-BBB and ITRI have signed an exclusive license agreement, granting to-BBB the worldwide rights for development and commercialization of a key technology that enables potential treatments for devastating brain diseases like Alzheimer's Disease, Parkinson's Disease, Viral Encephalitis, Stroke and Brain tumors, to safely cross the neuroprotective blood-brain barrier (BBB).

The promising G-Technology was pioneered by an expert team of drug delivery scientists from the Industrial Technology Research Institute (ITRI) of Taiwan, R.O.C.. For the brain drug targeting company to-BBB, the worldwide license agreement opens a gateway to treatments of devastating brain diseases. "The G-Technology from ITRI is a major breakthrough for the targeting of drugs to the brain. No other technology is able to achieve the transport across the blood-brain barrier with the favorable pharmacokinetic and safety profile of the G-Technology.", says Pieter Gaillard, Chief Scientific Officer of to-BBB.

The G-Technology is based on the endogenous tripeptide glutathione and targets to glutathione transporters which are highly expressed on the blood-brain barrier. The blood-brain barrier is a tight seal of endothelial cells that line the blood vessels of the brain and selectively allow the entry of only certain molecules into the brain. Amongst these is glutathione, which has favorable antioxidant-like properties and plays a central role in detoxification of intracellular metabolites. Of special relevance for validation studies is that the glutathione transporters are conserved across all mammalian species, including humans.

Glutathione is found in high levels in the brain and cerebral vasculature and is considered to be safe to administer to humans for a prolonged period of time. Glutathione is marketed as functional food ingredient and antioxidant, and applied as supportive therapy in cancer and HIV treatments and as excipient in parenteral formulations. Glutathione coated on the surface of nanosized liposomes was shown to be well tolerated and to effectively deliver several classes of drugs to the brain in a range of experimental studies reproducibly performed by independent laboratories.

A vast number of more than 30 million people worldwide suffer from a major neurological disease with hardly any hope to be cured. It is not the lack of potentially effective therapies causing this personal and economical burden. It is the fact that more than 95% of potential treatments are unable to get into the brain due to the blood-brain barrier (BBB).

The key technology enables potential treatments for brain diseases to cross this barrier. The G-Technology can deliver new treatment options for the millions of patients suffering from currently non-treatable brain diseases like Alzheimer's Disease, Parkinson's Disease, Viral Encephalitis, Stroke and Brain tumors.

About to-BBB

to-BBB is a Dutch biotechnology company in the field of brain-targeted drug delivery which uses its platform technologies to synergize with established and marketed drugs. to-BBB's vision is that the treatment of currently unserved brain diseases will be best achieved by targeting to endogenous blood-to-brain uptake systems for the delivery of drugs. The company will be flexible, open-minded and collaborative in developing treatments for devastating brain disorders by combining existing drugs with proprietary drug targeting technologies.

to-BBB is headquartered in The Netherlands at the Leiden Bio Science Park and established a fully owned subsidiary, to-BBB Taiwan Ltd., in Taipei, Taiwan.

About ITRI

The Industrial Technology Research Institute (ITRI) is a national research organization that serves to strengthen the technological competitiveness of Taiwan. ITRI's 6,000 employees focus on six major fields: Communication and Optoelectronics, Precision Machinery and MEMS, Materials and Chemical Engineering, Biomedical Technology, Sustainable Development, and Nanotechnology, to lay down the foundation for innovative research in the future of technological industry, and hence, transform Taiwan's domestic industry into a global bedrock for technological innovation. The G-Technology was developed in the Drug Delivery Department of Dr. Maggie Lu at the Biomedical Engineering Research Laboratories (BEL) in Hsinchu City.

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