

ILIAS Biologics Publishes Collaborative Study on Exosome-based Therapeutics for Brain Neuroinflammation

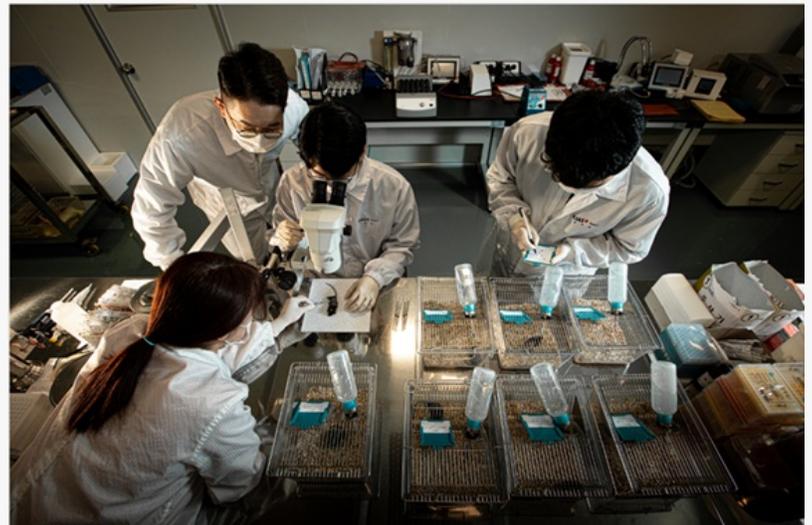
Demonstrating the Potential of Innovative Exosome Technology to Mitigate Age-Related Neuroinflammation and Cognitive Decline

EUNPYEONG-GU, SEOUL, SOUTH KOREA, February 18, 2025 /EINPresswire.com/ -- ILIAS Biologics (CEO Dr. Chulhee Choi, hereinafter "ILIAS"), a biotech company specializing in exosome-based therapeutics, announced the results of a collaborative study conducted with Professor Youn-Hee Choi from the Department of Physiology at Ewha Womans University College of Medicine and Professor Heon Yung Gee from the Department of Pharmacology at Yonsei University College of Medicine. The study confirmed that exosomes loaded with an NF- κ B (nuclear factor kappa B) inhibitory protein, termed as Exo-srI κ B, effectively mitigate neuroinflammation associated with aging.

The findings were published in the international journal *Experimental & Molecular Medicine*, a medical research journal under Springer Nature, under the title "Exosome-based targeted delivery of NF- κ B ameliorates age-related neuroinflammation in the aged mouse brain." *Experimental & Molecular Medicine* is a leading international journal in the field of



ILIAS Biologics Inc. Headquarters (Image: ILIAS Biologics Inc.)



ILIAS Biologics Inc. Laboratory (Image: ILIAS Biologics Inc.)

medical research, with an impact factor (IF) of 9.5 and ranked among the top 5% of journals in its category.

The study utilized ILIAS's proprietary EXPLOR® platform to load a nondegradable form of I κ B into exosomes, creating Exo-srI κ B, which inhibits the nuclear translocation of NF- κ B. The systemic administration of Exo-srI κ B successfully inhibited neuroinflammation and revealed the regulatory mechanisms of interferon-responsive microglia and macrophages, which are known to be

key drivers of neuroinflammation. Additionally, single-cell RNA sequencing analysis showed that Exo-srI κ B selectively suppressed NF- κ B activation, effectively reducing inflammatory responses.



ILIAS Biologics Inc. Technology (Image: ILIAS Biologics Inc.)

The study provides scientific validation that exosome-based therapy could serve as a more precise and safer alternative to conventional anti-inflammatory treatments. Given that neuroinflammation is a major contributor to cognitive decline and neurodegenerative diseases such as Alzheimer's and Parkinson's, these findings highlight a new and promising approach to treating neuroinflammation. Based on these results, exosome technology is expected to overcome the limitations of existing treatments and mark a significant turning point in the development of therapeutics for neurodegenerative diseases.

Dr. Chulhee Choi, CEO of ILIAS Biologics, stated, "This study demonstrates that Exo-srI κ B effectively suppresses neuroinflammation, presenting a promising new approach for treating neuroinflammatory diseases related to aging. Building on these findings, we will seek collaborations with global pharmaceutical companies and strive to advance into clinical development to bring exosome-based therapeutics to market. This achievement further reinforces ILIAS's leadership in next-generation exosome therapeutics. Exosome-based therapies are poised to usher in a new paradigm in disease treatment and establish themselves as a key technology driving future medical innovation."

ILIAS is now accelerating its drug development efforts for neurodegenerative diseases based on these findings. The company is engaged in discussions with major global pharmaceutical companies for potential technology licensing and joint development. Additionally, ILIAS continues to expand its pipeline of exosome-based therapeutics targeting inflammatory, immune, and neurodegenerative diseases, with a long-term goal of commercializing exosome therapies through ongoing research and development.

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