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**Publication of an Article in Molecular Therapy Demonstrates That the Human Bone Marrow-Derived Modified Mesenchymal Stem Cell Vandefitemcel (SB623) Improves Cortical Excitability in Rats with Focal Cerebral Ischemia**

SanBio Co., Ltd. hereby provides on this matter as per the attached document.



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**Publication of an Article in *Molecular Therapy* Demonstrates That the Human Bone Marrow-Derived Modified Mesenchymal Stem Cell Vandefitemcel (SB623) Improves Cortical Excitability in Rats with Focal Cerebral Ischemia**

SanBio Co., Ltd. (Head office: Chuo-ku, Tokyo, Representative Director and President: Keita Mori), hereby announce the publication of an article on our basic research in the online edition of *Molecular Therapy*, an American scientific journal.

The article, titled “Modified human mesenchymal stromal/stem cells restore cortical excitability after focal ischemic stroke in rats,” is available via the following link.

[https://www.cell.com/molecular-therapy-family/molecular-therapy/fulltext/S1525-0016\(24\)00807-4](https://www.cell.com/molecular-therapy-family/molecular-therapy/fulltext/S1525-0016(24)00807-4)

This paper highlighted the following points:

- Mechanism of action: Implantation of hMSC-SB623 cells (vandefitemcel) was found to mitigate cortical hyperexcitability induced by cerebral ischemia and restore normal brain function.
- Therapeutic potential: hMSC-SB623 cells (vandefitemcel) promote neural regeneration, synaptic plasticity, and immunomodulation, indicating the potential for treating various neurological disorders that implicate network hyperexcitability.

“I am thrilled that our collaborative teamwork with SanBio scientists led to the discovery that transplanting hMSC-SB623 cells in the cerebral cortex at chronic time points after stroke was able to treat the cortical network hyperexcitability. The far-reaching immunomodulatory effect of these cells, in addition to their beneficial effects at chronic time points after stroke, gives hope for developing disease-modifying treatments for stroke and other disorders that involve hyperexcitable circuits. This work—a result of 8 years of work by a large team of scientists—demonstrates the power of interdisciplinary collaboration between a company and an academic research lab.” Said Dr. Jeanne Paz, PhD, Associate Investigator at Gladstone Institutes, a biomedical research organization in San Francisco, California, as well as Associate Professor of Neurology at the University of California, San Francisco.

Shinya Hirata, Head of Research and Development, gave the following comments on the implications of the research findings for the Group’s business: “In our press release dated July 4,\* we announced the publication of an article demonstrating that vandefitemcel (SB623) promotes neuronal activity and network formation. The research results revealed novel mechanisms by which vandefitemcel (SB623) mitigates cortical hyperexcitability induced by cerebral ischemia and restores normal brain function, substantiating its neural regenerative capabilities from a new perspective. Based on these mechanisms, future applications for treating various central nervous system disorders are anticipated. Effective treatments remain unavailable for many central nervous system disorders, resulting in unmet medical needs. However, vandefitemcel

(SB623), when administered directly to the brain, has the potential to promote regenerative functions and meet the needs of numerous patients worldwide.”

\* [Results of Basic Research] Publication of an Article on the Neuronal Activity and Network Formation Promotion of the Key Development Product SB623

URL: <https://ssl4.eir-parts.net/doc/4592/tdnet/2471096/00.pdf>

This matter will have only a minimal impact on the financial performance of the current fiscal year.

### **About Vandefitemcel (SB623)**

Vandefitemcel (SB623) is a human (allogeneic) bone marrow-derived modified mesenchymal stem cell that is produced by modifying and culturing mesenchymal stem cells derived from the bone marrow aspirate of healthy adults. The implantation of AKUUGO<sup>®</sup> into damaged nerve tissues in the brain is expected to trigger the release of FGF-2 (a type of protein) and other substances, which in turn will promote the natural regenerative ability of damaged nerve cells and induce proliferation and differentiation of nerve cells. In Japan, vandefitemcel (SB623) was designated as a regenerative medicine product under the Sakigake Expedited Review System by the Ministry of Health, Labour and Welfare. At a meeting held in June 2024, the Pharmaceutical Affairs Council’s Subcommittee on Regenerative Medicine Products determined that it was possible to grant vandefitemcel (SB623), “AKUUGO<sup>®</sup> suspension for intracranial implantation,” conditional and time-limited approval for the improvement of chronic motor deficit in the chronic phase of traumatic brain injury. Vandefitemcel (SB623) has been granted regenerative Medicine Advanced Therapy (RMAT) designation from the U.S. Food and Drug Association, and the Advanced Therapy Medicinal Product classification from the European Medicines Agency.

### **About SanBio Group (SanBio Co., Ltd. and SanBio, Inc.)**

SanBio was founded in California, the US in 2001 with the vision of becoming a global leader in the field of regenerative medicine, and is engaged in the regenerative cell business—research, develop, manufacture, and sell regenerative cell medicines. On July 31st 2024, under the Sakigake Designation Program, we obtained conditional and time-limited approval for our mainstay product AKUUGO<sup>®</sup> for the indication of improving chronic motor paralysis associated with traumatic brain injury. Going forward, we will continue focusing our R&D efforts on central nervous system disorders with significant unmet medical needs that cannot be addressed by existing medicine or drugs. The Company is headquartered in Tokyo, Japan and Oakland, California, and additional information about SanBio Group is available at <https://sanbio.com/en/>

[Disclaimer]

This document may contain forward-looking statements such as forecasts, outlooks, goals, and plans related to SanBio Inc. These statements are based on information available to the Company at the time of preparation of this document, including forecasts and other projections. In addition, certain assumptions (hypotheses) are used in making these statements. These statements or

assumptions are subjective and may prove to be incorrect in the future or may not be realized in the future. There are several uncertainties and risks that could cause this to happen. Please refer to our financial statements and annual reports for additional information on these matters. The forward-looking statements in this document speak only as of the date of this document (or as otherwise indicated therein), as described above, and we have no obligation or policy to update such information from time to time to keep it current.

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