

FUJIFILM Cellular Dynamics Introduces First-of-its-Kind Human iPSC-derived Blood-Brain Barrier Isogenic Kit

MADISON, Wis., June 1, 2023 – FUJIFILM Cellular Dynamics, a leading global developer and manufacturer of human induced pluripotent stem cells (iPSC) today announces the global commercial launch of its human iPSC-derived iCell[®] Blood-Brain Barrier Isogenic Kit for scientists engaged in neuroscience research and drug discovery for neuroactive drugs. The first-of-its-kind kit models the human blood-brain barrier and can advance drug discovery, drug development and medical research for central nervous system (CNS) disorders.

The iCell Blood-Brain Barrier Isogenic Kit is an off-the-shelf, ready to use, human iPSC-derived cell model that has barrier integrity and functionality consistent with in vivo physiological properties. The kit consists of human iPSC-derived iCell Brain Microvascular Endothelial Cells, iCell Pericytes, and iCell Astrocytes, as well as the critical culture media, which was jointly optimized through FUJIFILM Irvine Scientific Inc.'s media optimization program and is manufactured by FUJIFILM Irvine Scientific, Inc., and protocols necessary to provide a complete solution for creating a complex, 3D cellular model.

The blood-brain barrier consists of a specialized network of cells and is a semi-permeable boundary between the brain's vasculature and other components that make up brain tissue.¹ Its function is to maintain a tightly controlled microenvironment by regulating the passage of large and small molecules (and pathogens) into the brain.² A robust and human relevant blood-brain barrier model is essential to further our understanding of CNS physiology and develop neurological disease treatments with improved permeability and pharmacokinetics.³

According to the World Health Organization (WHO), one in three people will develop some type of neurological disorder during their lifetime. Further, roughly nine million people die each year from neurological disorders, which include stroke, migraines, dementia and meningitis.⁴

"As a longstanding leader and innovator in the field of iPSC technology, I am proud of the team at FUJIFILM Cellular Dynamics for introducing another groundbreaking technology to advance the field

¹ Chow BW, Gu C. 2015. *Trends Neurosci* 38(10):598-608.

² Kadry H, et al. 2020. Fluids Barriers CNS 17(1):69.

³ Jagtiani E, et al. 2022. J Control Release 343:13-30.

⁴ Kolappa K, Seeher K, et al. 2022. Optimizing brain health across the life course: WHO position paper





of medical research," said Tomoyuki Hasegawa, president and CEO, FUJIFILM Cellular Dynamics, Inc. "This kit will enable neuroscience researchers to deepen their knowledge of disease biology, improve the success rate of CNS therapies, and aid drug developers in drug discovery and toxicological studies to advance treatment options, providing more hope for patients and their caregivers."

"As a market-first, FUJIFILM Cellular Dynamics is providing a ready-to-use kit for researchers and scientists to use a humanized system that will provide biologically relevant information about the ability of drugs to cross the blood-brain barrier," said Dr. Keith R. Olson, Ph.D., executive vice president of commercial operations, FUJIFILM Cellular Dynamics, Inc. "Previously, research in this field has been limited to assay systems that either utilize animal cells or live animals, or do not include all relevant cell types."

FUJIFILM Cellular Dynamics currently provides over 20 iPSC-derived cell models for drug discovery globally, including human iPS cell-derived cardiomyocytes and microglia. The iCell Blood-Brain Barrier Isogenic Kit is commercially available and will begin shipping by the end of June 2023. To learn more about FUJIFILM Cellular Dynamics' blood-brain barrier cellular model, you can visit https://www.fujifilmcdi.com/icell-blood-brain-barrier-kit-coming-soon/.

The iCell Blood-Brain Barrier Isogenic Kit will also be on display at upcoming key conferences including BIO International Convention (June 5-8, 2023) and ISSCR Annual Meeting (June 14-17, 2023), both located in Boston, Massachusetts.

About FUJIFILM Cellular Dynamics, Inc.

FUJIFILM Cellular Dynamics, Inc. is a leading developer and manufacturer of human iPSCs utilized in drug discovery, contract development and manufacturing services, and cell therapies. FUJIFILM Cellular Dynamics is using its expertise in iPSC technologies to develop robust cell therapeutics products to address unmet medical needs in areas such as age-related macular degeneration, retinitis pigmentosa and heart diseases. For its partners, FUJIFILM Cellular Dynamics utilizes its iPSC platform to advance the progress of therapeutic candidates in the clinic and provides contract development and manufacturing (CDMO) services. In addition to cell therapy, FUJIFILM Cellular Dynamics also offers life science research tools including the company's inventoried iCell® products, which are available in almost any cell type and are sourced from multiple cell lines which can be applied for target identification as well as toxicity testing. The company also offers custom cell services and cell banking. FUJIFILM Cellular Dynamics' goal is to leverage the vast utility of iPSCs to advance human health and improve the quality of life for patients around the world. For more information,



please visit: <u>https://www.fujifilmcdi.com/</u>

About FUJIFILM Holdings Corporation

FUJIFILM Holdings Corporation, Tokyo, leverages its depth of knowledge and proprietary core technologies to deliver "Value from Innovation" in our products and services in the business segments of healthcare, materials, business innovation, and imaging. Our relentless pursuit of innovation is focused on providing social value and enhancing the lives of people worldwide. Fujifilm is committed to responsible environmental stewardship and good corporate citizenship. For more information about Fujifilm's Sustainable Value Plan 2030, <u>click here</u>. For the year ended March 31, 2023, the company had global revenues of approximately 2.9 trillion yen (21 billion USD at an exchange rate of 134 yen/dollar). For more information, please visit: www.fujifilmholdings.com.

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