FUJIFILM CELLULAR DYNAMICS INC. LAUNCHES NEW PRODUCT iCELL MICROGLIA, AN IPSC-DERIVED NEURAL CELL TYPE

hiPSC-derived microglia are utilized with the aim of advancing research to fulfill unmet medical needs for patients with neurodegenerative diseases

MADISON, Wis., January 08, 2019 -- FUJIFILM Cellular Dynamics, Inc. (FCDI), a leading developer and manufacturer of human induced pluripotent stem cells (iPSCs) and tissue-specific cells differentiated from iPSCs, has announced the launch of its newest product, iCell® Microglia. Microglia are the immune cells of the central nervous system responsible for fundamental physiological and pathological processes. Differentiated from human iPSCs, iCell Microglia will be used in life science research to enable the study and development of therapies for degenerative neurological diseases such as Alzheimer's disease.

"In life science research, the use of iPSCs can help confirm the efficacy and efficiency of new drug candidates' effects on human biology, and it can also help identify new indications for approved, existing therapies," said Seimi Satake, Chairman and Chief Executive Officer of FCDI. "As human iPSC derived-cells provide a more relevant biology than current animal models in preclinical trials, iCell Microglia can help researchers gain a greater understanding of the nature of neurological diseases, and how to treat the diseases."

In the United States, Alzheimer's disease, a common neurological disorder, affects about 5.7 million people; it is characterized by cognitive decline as a result of cell death. Researchers believe that at the onset of neurological disorders, microglia that are present in the brain and spinal cord, accumulate around injured neurons. Until now, the limited availability and inconsistency of primary human microglia has constrained research and therapeutic progress.

Utilizing iPSC-derived microglia for drug development allows researchers to study the effects of therapies on the human central nervous system, enabling the study of cytokine signaling, synaptic transmission, and plasticity in normal central nervous system function and during disease progression.

To develop iCell Microglia, FCDI entered into an exclusive patent license agreement with the University of California – Irvine (UCI) through its offices at UCI Applied Innovation to license and commercialize UCI's technologies for derivation of microglia in the commercial research field. The intellectual property licensed by UCI Applied Innovation is the outcome of the published study, iPSC-derived Human Microglia-like Cells to Study Neurological Diseases (Abud, Edsel M. et al., Neuron, Volume 94, Issue 2, 278 - 293.e9), which used FCDI's proprietary iPSC-derived hematopoietic progenitor cells (HPCs) as well as other HPCs.

There is a growing demand for new drug development strategies that can improve assessment of drug candidates in pre-clinical studies, leading to an efficient pipeline of new therapies, reduced costs, and shorter development times. Traditional drug discovery methodologies, including in vitro and in vivo studies, lack efficacy as these methods do not accurately represent human biology. For this reason many researchers are turning to human iPSCs, which have the capacity for infinite proliferation and the ability to differentiate into various cells, for use in new drug development.

Leveraging its depth of knowledge and proprietary technologies, Fujifilm and FCDI are focusing on regenerative medicine applications with a concentration on age-related macular degeneration, retinal pigment degeneration, Parkinson's disease, heart disease, and cancer, as well as production of iPSC-derived cells for use in drug development, toxicology, and safety pharmacology. FCDI partners alongside Fujifilm companies including Japan Tissue Engineering Co., Ltd. which launched and developed Japan's first regenerative medicine products; Fujifilm Wako Pure Chemical Industries, Ltd. and FUJIFILM Irvine Scientific Inc. which both provide reagents and media necessary for cell culture.

About Fujifilm:

FUJIFILM Cellular Dynamics, Inc. (FCDI), is a leading developer and supplier of human cells used in discovery, toxicity testing and regenerative medicine applications. Leveraging technology that can be used to create induced pluripotent stem cells (iPSCs) and differentiated tissue-specific cells from any individual, FCDI is committed to advancing life science research and transforming the therapeutic development process in order to fundamentally improve human health. The company's inventoried iCell® products and donor-specific MyCell® Products are available in the quantity, quality, purity and reproducibility required for drug and cell therapy development. For more information, please visit: FujifilmCDI.com

FUJIFILM Holdings Corporation, Tokyo, Japan brings cutting-edge solutions to a broad range of global industries by leveraging its depth of knowledge and fundamental technologies developed in its relentless pursuit of innovation. Its proprietary core technologies contribute to the various fields including healthcare, graphic systems, highly functional materials, optical devices, digital imaging and document products. These products and services are based on its extensive portfolio of chemical, mechanical, optical, electronic and imaging technologies. For the year ended March 31, 2018, the company had global revenues of $23.0 billion, at an exchange rate of 106 yen to the dollar. Fujifilm is committed to environmental stewardship and good corporate citizenship. For more information, please visit: www.fujifilmholdings.com.

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Media Contact:
Christine Jackman
Fujifilm
(914) 789-8523
christine.jackman@fujifilm.com