



# FOR IMMEDIATE RELEASE

July 21, 2015

JCR Pharmaceuticals Co., Ltd. Eisai Co., Ltd.

# JCR AND EISAI CONCLUDE FEASIBILITY STUDY AGREEMENT ON APPLICATION OF BLOOD-BRAIN-BARRIER PENETRATION TECHNOLOGY TO DISCOVER NEW TREATMENTS

JCR Pharmaceuticals Co., Ltd. (Headquarters: Ashiya, Hyogo, Chairman, President and CEO: Shin Ashida, "JCR") and Eisai Co., Ltd. (Headquarters: Tokyo, CEO: Haruo Naito, "Eisai") jointly announced that the two companies have concluded a feasibility study agreement on July 21, 2015, under which they will examine the possibility of applying JCR's proprietary blood-brain-barrier (BBB) penetration technology "J-Brain Cargo" to the discovery of new treatments.

Under the terms of this agreement, JCR and Eisai will perform collaborative research using the J-Brain Cargo technology and certain pharmaceutical candidate compounds of Eisai's choice, aiming to create innovative pharmaceutical products primarily for diseases of the central nervous system.

J-Brain Cargo enables delivery of target substances across the BBB through a certain receptor expressed on the surface of vascular endothelial cells. JCR studies confirmed BBB penetration of J-Brain Cargo combined target substance as 20 to 100 times the target substance alone. It is an innovative technology which will provide pharmaceutical compounds of small or large molecules with the capacity to pass through the BBB. A substantially large portion of the pharmaceutical injected intravenously should be able to reach inside the brain and confer its effect. Significant improvements are expected for neurological disorders for which little improvements have been possible.

The conclusion of this agreement is expected to have a minor impact on consolidated financial results for the year ending March 31, 2016 for both companies.

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### <Notes to editors>

### 1. About the Blood Brain Barrier (BBB)

In order to prevent various toxic substances from damaging brain tissue, it is essential to maintain stability in the brain through a function that limits the transfer of physical substances from the bloodstream to the brain. Consequently, it is necessary to allow energy sources for neural activity, such as amino acids and glucose, to pass through, while acting as a barrier to prevent most other substances from freely entering the brain. This barrier function is formed by tight junctions of endothelial cells that line the inside of brain capillaries (capillaries outside the brain adhere relatively loosely with endothelial cells, allowing various substances to pass through the tissue). While it is difficult for large molecules such as highly water-soluble substances and proteins to penetrate this barrier, nutrients and other essential materials are able to selectively pass the BBB by a system consisting of various receptors and transporters in the microvascular endothelial cells of the brain. Conversely, any unnecessary substance that enter the microvascular endothelial cells of the brain are prevented from invading the brain by transporters that will excrete these materials back into the bloodstream.

### 2. About JCR Pharmaceuticals

JCR is a specialty pharma engaged in the research, development, manufacture and marketing of biopharmaceuticals and regenerative medicine with a focus on rare diseases. Its philosophy, "Contributing towards people's healthcare through pharmaceutical products" drives JCR to create innovative pharmaceutical products as value-added treatment options for the under-served patient community.

## 3. About Eisai

Eisai is a leading global research-based pharmaceutical company headquartered in Japan, and aims to be a "human health care (hhc)" company that gives first thought to patients and their families, and to increasing the benefits health care provides. Eisai has a global network of research facilities, manufacturing sites, and marketing subsidiaries, and more than 10,000 employees worldwide are engaged in development and provision of innovative new drugs in areas of unmet medical needs, primarily in the fields of neurology and oncology.