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ONO PHARMA USA, INC. Announces the Initiation of Phase 2 Study of Tirabrutinib, a BTK Inhibitor, in Patients with Primary Central Nervous System Lymphoma

CAMBRIDGE, Mass., -- ONO PHARMA USA, INC. (President/CEO, Kunihiro Ito) announced the initiation of a Phase 2 PROSPECT study of tirabrutinib hydrochloride (ONO-4059) (“Tirabrutinib”), a Bruton’s tyrosine kinase (“BTK”) inhibitor, in patients with primary central nervous system lymphoma (“PCNSL”) in the U.S.

The PROSPECT study is a multicenter, open-label, Phase 2 clinical study (ONO-4059-09), evaluating the efficacy, safety and pharmacokinetics of Tirabrutinib in patients with PCNSL. For more information, please visit the following website at [https://clinicaltrials.gov/ \(NCT04947319\)](https://clinicaltrials.gov/ (NCT04947319)).

“We are excited to initiate the PROSPECT study which will provide data on PCNSL patients in the U.S. The expansion of our Tirabrutinib development program into the U.S. reflects our commitment to patients fighting this disease in the U.S.” said Masahiro Katayama, Executive Vice President, US/EU Head of Clinical Development, ONO PHARMA USA, INC. “We look forward to understanding the potential of Tirabrutinib to treat the patients who suffer from PCNSL in the U.S.”

About PCNSL

PCNSL is a rare and aggressive extra nodal non-Hodgkin lymphoma (NHL) that is confined to the brain parenchyma, spinal cord, eye, or leptomeninges, without systemic involvement. The estimated annual incidence rate of PCNSL is 7 cases per 1,000,000 people in the U.S. The rate can further increase among immunocompetent people specifically in the elderly population aged 65 years and older. The signs and symptoms presented in patients with PCNSL vary depending on the neuroanatomical site of the lesion, and include cranial neuropathy, neuropsychiatric symptoms, symptoms associated with increased intracranial pressure, seizures, ocular symptoms, headache, dysmotility, cranial neuropathy, and radiculopathy.

There are currently no therapeutic products specifically approved for the treatment of PCNSL in the U.S. High-dose methotrexate (HD-MTX) based regimens are widely used for newly diagnosed patients with PCNSL as the front-line treatment. Despite recent progress resulting in the improvement of clinical outcomes in newly diagnosed patients with PCNSL after an induction treatment, approximately 20 to 30% of the patients are refractory to the initial treatment, and up to 60% of the patients will eventually relapse. For patients with relapsed or refractory PCNSL, there is no currently established standard of care in the U.S. and data guiding therapeutic approaches are very limited. Therefore, a new treatment option is in its demand for patients with relapsed or refractory PCNSL.

About Tirabrutinib

Tirabrutinib, discovered and developed by Ono Pharmaceutical Co., Ltd., is a highly potent second-generation selective BTK inhibitor. Signaling through the B-cell receptor (BCR) regulates cellular proliferation and activation, and promotes survival, differentiation, and clonal expansion of B-cells. The BCR signaling pathway plays an important role in a number of B-cell malignancies. Gene expression profiling data revealed BCR signaling as the most prominent pathway activated in chronic lymphocytic leukemia (CLL) cells isolated from lymphatic tissues.

In Japan, Tirabrutinib was approved in March 2020 for the treatment of relapsed or refractory PCNSL and launched under the tradename of Velexbu[®] in May 2020. In addition, Velexbu[®] was approved for the treatment of Waldenstrom macroglobulinemia and lymphoplasmacytic lymphoma in Japan in August 2020. It has not been approved in any other countries outside of Japan.

About ONO PHARMA USA, INC.

ONO PHARMA USA, INC. ("OPUS"), established in 1998 as the U.S. subsidiary of Ono Pharmaceutical Co., Ltd. ("Ono"), is pursuing the clinical development of new drug candidates and is aiming to establish its operation from the clinical development until the regulatory approval of the products in preparation for the commercialization of the products in the U.S. In addition, OPUS has been engaged in promotion of the discovery alliances and licensing activities to expand Ono's development pipeline and to pursue the commercialization opportunities in the U.S. For more information, please visit the company's website at <https://www.ono-usa.com/>.

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