OncoTherapy Science, Inc.
March 10, 2021

Publication of a paper describing the synergistic effect of OTS167 and FLT3 inhibitors on acute myeloid leukemia

An article that described the synergistic antitumor effect of OTS167 in combination with Fms-like tyrosine kinase 3 (FLT3) inhibitors in acute myeloid leukemia (AML) animal model has been published in *Blood Cancer Journal* by a research group led by Dr. Bartholomew Eisfelder in the laboratory of Dr. Wendy Stock, Department of Hematology/Oncology, University of Chicago.

The *FLT3* internal tandem duplication (FLT3-ITD) is one of the most frequent mutations found in patients with AML. In this paper, the authors investigated the antileukemia activity of OTS167 alone or in combination with tyrosine kinase inhibitors (TKIs) in *FLT3* mutant AML. OTS167 reduced FLT3 expression in addition to inhibiting MELK. OTS167 in combination with FLT3 TKIs resulted in synergistic induction of *FLT3* mutant cell death in *FLT3* mutant cell lines. In a *FLT3* mutant AML xenograft mouse model, combination therapy of OTS167 with the FLT3 inhibitor gilteritinib prolonged overall survival.
These findings suggest that signaling through MELK is necessary for the translation and expression of FLT3-ITD, and blocking MELK with OTS167 represents a viable therapeutic strategy for patients with *FLT3* mutant AML.

The paper has been published online in *Blood Cancer Journal.*
https://www.nature.com/articles/s41408-021-00433-3