

OncoTherapy Science, Inc.

February 12, 2016

Publication of a paper describing the possible effect of a MELK inhibitor,  
OTS167, on small cell lung cancer

Important biological roles of a protein kinase MELK (Maternal Embryonic Leucine-zipper Kinase), on which our small molecule inhibitor OTS167 targets, were reported by a collaboration between Prof. Yusuke Nakamura's group in The University of Chicago and our research development group in OncoTherapy Science (OTS).

MELK is known to be highly expressed in various types of cancer and play critical roles in maintenance of cancer stem cells. OTS is currently conducting clinical trials of OTS167 in the United States and Australia. In this study, the collaborative group demonstrated that MELK was overexpressed in the majority of small cell lung cancer (SCLC) cell lines and primary tumors, and that either knockdown of MELK or treatment with OTS167 exhibited strong growth inhibitory effect on those SCLC cell lines.

SCLC, a biologically different type of lung cancer from non-small cell lung cancer (NSCLC), comprises approximately 15% of all lung cancers. SCLC usually exhibits aggressive behavior, rapid growth, and early spread to distant sites. Most of the SCLC cases are diagnosed at an advanced stage for which surgical resection is not applicable. The five-year survival rate for SCLC is as low as 10% and little improvement was observed in the last three decades.

Based on the results in this manuscript, we plan further clinical development of OTS167 in SCLC.

The paper has been published online in the journal *Oncotarget*.

<http://www.impactjournals.com/oncotarget/index.php?journal=oncotarget&page=article&op=view&path%5B%5D=7297>