IMS-P17 **ASP2215, a Novel FLT3/AXL Inhibitor: Preclinical Evaluation in Acute Myeloid Leukemia**

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Activating mutations in FLT3, such as internal tandem duplication (ITD) and tyrosine kinase domain point mutations are associated with poor prognosis in acute myeloid leukemia (AML) patients. ASP2215 is a novel small-molecule tyrosine kinase inhibitor currently under clinical trial evaluation. ASP2215 inhibited the growth of MV4-11 AML cells, which harbor FLT3-ITD, with an IC_{50} value of 0.92 nM, accompanied with inhibition of phosphorylation of FLT3 and its downstream molecules. ASP2215 also inhibited the growth of Ba/F3 cells expressing FLT3-ITD and/or FLT3-D835 mutation with similar activity. In an MV4-11 subcutaneous model, ASP2215 administration induced complete tumor regression at 6 mg/kg or more. Further, ASP2215 decreased tumor burden in bone marrow and prolonged the survival of mice intravenously transplanted with MV4-11 cells. These findings support the development of ASP2215 for the potential use in treating AML.