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Non-clinical Development of SREBP1 Degrader for the Cancer Stem Cell-targeted Treatment of Glioblastoma

MEDIFIC Inc.

ONCOLOGY | **Non-Clinical**

Product Type	Small molecule, targeted anti-cancer drug, First-in-class
Indication	Glioblastoma (GBM), hepatocellular carcinoma (HCC), other solid cancers, brain metastases
Target	SREBP1-dependent lipid metabolism
MoA(Mechanism of Action)	Binds to SCAP to inhibit protein-protein interaction between SCAP and SREBP1, thereby causing the degradation of SREBP1.
Competitiveness	- GBM, the primary indication, is an incurable and deadly brain tumor. No therapeutic option other than combination of radiotherapy and temozolomide (TMZ) are applicable, therefore, there is an urgent need for a novel and effective therapy for the treatment of GBM. - Cancer stem cells (CSCs) are the primary driver of metastasis, therapeutic resistance and recurrence. Our candidate drug, MFC0101-7043, effectively targets CSCs by specifically suppressing the SREBP1-dependent lipid metabolism. - MFC0101-7043 has the ideal characteristics of an oral anti-GBM drug; high blood-brain barrier permeability, safety, and favorable pharmacokinetic profiles. - MFC0101-7043 showed synergistic anti-cancer efficacy resulting in complete response (CR) when combined with TMZ. Therefore, it is promising that combination of TMZ and MFC0101-7043 would prolong survival of patients with GBM. - MFC0101-7043 is applicable to a wide range of intractable diseases related to SREBP-dependent lipid metabolism, such as HCC, brain metastases and metabolic disorders.
Development Stage	Non-Clinical
Route of Administration	Oral

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