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Development of KARS1-target drug candidate with broad and high efficacy for treatment of NASH (non-alcoholic steatohepatitis)

Zymedi

ZYMEDI

METABOLIC | **Candidate**

Product Type	Chemical Small molecule
Indication	NAS score 4, F2 fibrosis or more non-alcoholic steatohepatitis (NASH)
Target	KARS1 (lysyl-tRNA synthetase 1)
MoA(Mechanism of Action)	• KARS1 is a fundamental enzyme involved in protein synthesis and generally present in the cytoplasm. KARS1 moves to the cell membrane of monocytes/ macrophages to promote the cell infiltration from blood vessel to target tissues. It is also secreted out of the cells in an inflammatory environment and binds to macrophages to promote M1 polarization of macrophages, resulting in hepatocyte steatosis and cell death. • Our current lead compound, ZMC001 not only blocks the cell membrane exposure of KARS1 but also the proinflammatory signaling activity of secreted KARS1, thereby suppressing inflammatory microenvironment, fibrosis and steatosis in liver
Competitiveness	ZMC001 shows the broad spectrum of efficacy on the pathologic systems of NASH such as inflammation, fibrosis and steatosis with novel mechanism of action targeting extracellular KARS1. With the high and broad efficacy and unique mode of action, ZMC001 and its derivatives can be the world's first disease modifying agent (DMA) that can be administered as a monotherapy and in combination with resmetirom or other available drugs.
Development Stage	Candidate
Route of Administration	PO QD

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