

# Establishing of Fc-flagellin-based candidate drug (MSP-306) for NASH treatment and entering non-clinical trials

MediSpan Co., Ltd



METABOLIC	Candidate
Product Type	Fc fusion protein biotherapeutic
Indication	NASH (Nonalcoholic steatohepatitis)
Target	TLR5
MoA(Mechanism of Action)	<p>Toll-like receptor 5 (TLR5) is one of the innate immune system receptors which recognizes bacterial flagellin and triggers an immune response by the NF-κB signaling pathway. Unlike other TLRs, TLR5 has been reported that induce the secretion of tissue-protective factors and have an anti-inflammatory function. We generated MSP-306, a hIgG4 Fc fusion flagellin, leading to several positive effects in the liver via TLR5, including induction of IL-22 secretion to promote liver regeneration and suppression of ACCA1 to reduce liver fat accumulation. In addition, MSP-306 also remarkably induced the metabolic regulator FGF21 and anti-inflammatory factor IL-10 in the liver. NASH, which exhibits complex symptoms, currently has no marketed treatment. Through this project, we try to prove MSP-306, as a candidate for innovative new drugs in NASH, with multiple therapeutic effects to improve liver inflammation, metabolic dysfunction, and hepatic fibrosis.</p>
Competitiveness	<p>NASH, a disease with complex symptoms, is under development of drugs mainly targeting metabolic regulation, but there are currently no approved drugs. Unlike existing drugs, MSP-306 targets TLR5 and is a new concept treatment that shows various therapeutic effects of controlling liver metabolism in NASH, suppressing inflammation, and improving liver fibrosis simultaneously.</p>
Development Stage	Candidate
Route of Administration	Subcutaneous injection