

Development of mRNA Immuno-Oncology Therapeutic Candidates Leveraging an AI-Based Tumor-Targeted Fusion Cytokine Design Platform

ONCOLOGY Candidate

Product Type	Gene & Nucleic acids
Indication	HNSCC
Target	****/####
MoA(Mechanism of Action)	Following hepatic translation, the CTRNA-001-encoded fusion cytokine is secreted into the systemic circulation and selectively homes to ****-expressing tumor cells. Within the tumor microenvironment (TME), it engages #### on tumor-infiltrating immune cells, triggering a potent effector immune response that drives robust tumor growth inhibition.
Competitiveness	CTRNA-001 offers four distinct competitive advantages over conventional immunocytokines. First, as an mRNA-based modality, it leverages the host's translational machinery to ensure prolonged and stable <i>in vivo</i> protein expression. Second, ****-directed selectivity drives enhanced accumulation and retention within the TME. Third, the platform demonstrates a superior safety profile, achieved through the strategic elimination of ++++ binding combined with controlled <i>in vivo</i> expression. Fourth, it is meticulously engineered to maximize therapeutic efficacy while maintaining dosing convenience. Collectively, CTRNA-001 represents a structurally optimized platform that overcomes the pharmacokinetic and toxicity limitations of conventional immunocytokine therapies.
Development Stage	Candidate
Route of Administration	Intravenous injection

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