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IMPROVED INMMUNOGENECITY AND THERAPEUTIC EFFICACY OF A HOMOGENEOUS NON-NATURAL CANCER VACCINE

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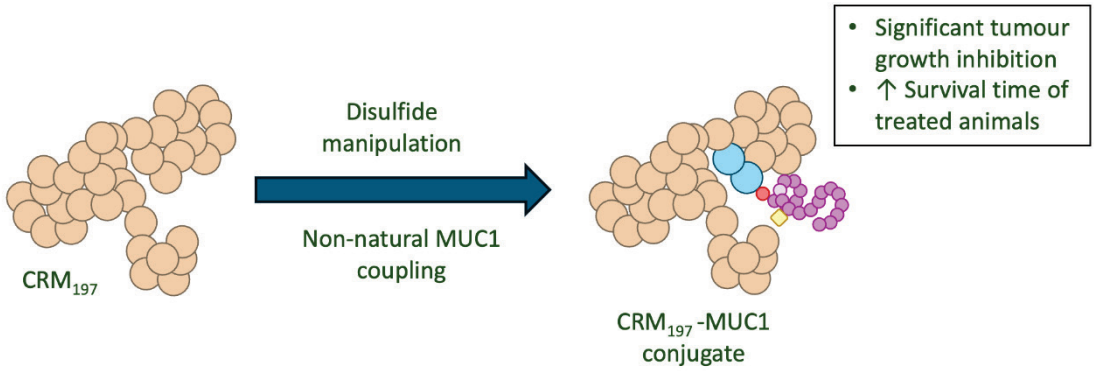
Glycopeptides derived from the glycoprotein Mucin-1 (MUC1) possess significant potential as tumor-associated antigens (TAAs) for the development of cancer vaccines.[1] Nevertheless, their deployment in immunotherapeutic applications is hindered by critical challenges, including limited immunogenicity and inefficient selective conjugation to carrier proteins. In this study, we report a novel homogeneous cancer vaccine based on an unnatural MUC1-derived glycopeptide that we previously reported,[2] conjugated to the carrier protein CRM197 via site-selective chemical modification. This methodology effectively mitigates these challenges, resulting in significant enhancement of tumor growth inhibition in colon and pancreatic cancer models and a notable extension of survival time in treated animals.[3] These results highlight the potential of this vaccine platform to advance the field of cancer immunotherapy.



Referencias

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