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Technology/ Title	NTSR1Ab/An ADC targeting NTSR1- For Cancer Therapy	
Subtitle		
Technology Type	☐Biotechnology	☐Device/Diagnostics
	■Pharmaceutical	☐Others:_____
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Link	https://ibpr.nhri.edu.tw/zhtw/wp-content/uploads/2023/06/NCR-of-anti-NTSR1-ADC-May-30-2023-V2.pdf	
Technology Description	The drug target based on NTSR1 utilizes high-specificity NTSR1 antibodies in conjunction with a tri-mannosyl antibody-drug conjugate platform technology to develop the NTSR1 Antibody-Drug Conjugate (NTSR1-ADC) for treating head and neck cancer and other cancers with high NTSR1 expression, whereas low NTSR1 expression is found among normal human tissue. The affinity of NTSR1-ADC reaches KD values of 10^{-9} M, and it has been observed that humanized anti-NTSR1 antibodies exhibit a prolonged half-life in mice, extending up to 180 hours. Additionally, efficacy verification of NTSR1-ADC has been conducted *in vivo* using the head and neck cancer cell xenograft animal model. Results indicate significant inhibition of tumor growth, underscoring the potential development of NTSR1-ADCs for the treatment of head and neck cancer.	

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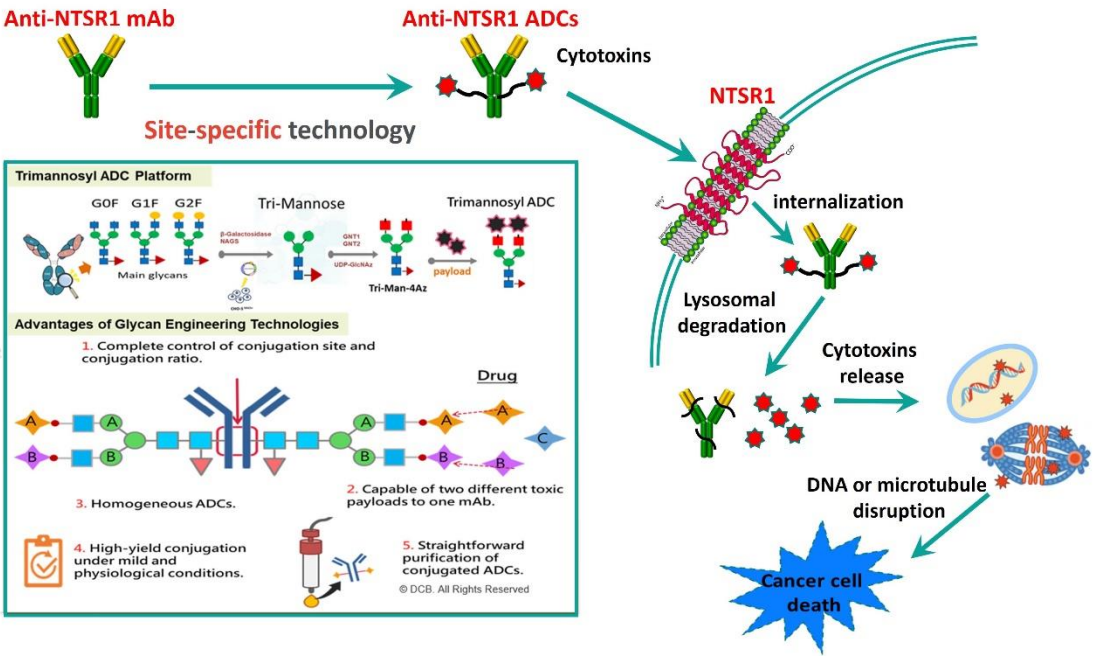
Intellectual Property	Patent title: ANTI-HUMAN NEUROTENSIN RECEPTOR 1 ANTIBODY AND USE THEREOF USA (US17926452), Taiwan (I781647)
Key Publications	N/A
Business Opportunity	Utilizing the specific targeting ability of NTSR1 antibodies against cancer cells, combined with cytotoxic drugs to form NTSR1-ADCs, it is anticipated that the developed ADCs will demonstrate potential in combating head and neck cancer in both cell experiments and mouse models. The research achievement of the NTSR1-ADC holds promise for application in cancer therapy, potentially reducing cancer incidence and recurrence.


Anti-NTSR1 mAb
Anti-NTSR1 ADCs
Cytotoxins
Site-specific technology
NTSR1
internalization
Lysosomal degradation
Cytotoxins release
DNA or microtubule disruption
Cancer cell death
Trimannosyl ADC Platform
G0F G1F G2F
Main glycans
Tri-Mannose
Tri-Man-4Az
Trimannosyl ADC
payload
Advantages of Glycan Engineering Technologies
1. Complete control of conjugation site and conjugation ratio.
Drug
2. Capable of two different toxic payloads to one mAb.
3. Homogeneous ADCs.
4. High-yield conjugation under mild and physiological conditions.
5. Straightforward purification of conjugated ADCs.
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