

○ Platform Technology for Oncology

Title	Development of Next-Generation Modality-Based Anticancer Platform Technologies
Definition	<ul style="list-style-type: none"> ○ This project aims to develop next-generation modality-based therapeutic platforms that overcome the limitations of traditional small-molecule and monoclonal antibody anticancer drugs ○ It focuses on establishing versatile anticancer technology platforms capable of inducing selective tumor-cell death or overcoming resistance mechanisms, thereby expanding the therapeutic window of immuno-oncology and targeted cancer ○ Representative modalities include technologies and products related to 1) Targeted Protein Degradation (TPD), 2) Proximity Inducers, 3) Antibody-Drug Conjugates (ADC), and 4) novel immune-oncology platforms integrating reversible antibody masking
R&D Plan	<ul style="list-style-type: none"> ○ (Step 1) Preclinical Research and IND-enabling Nonclinical Package <ul style="list-style-type: none"> - Identify and validate lead candidates utilizing next-generation anticancer modality platforms (e.g., TPD, proximity inducer, ADC, and masking antibody technologies) - Establish formulation and stability profiles and develop a scalable process concept to support subsequent GMP development - Complete preclinical efficacy, IND-enabling safety studies(including GLP toxicology as required) and compile a nonclinical IND filling-ready data package for 1~2 candidates ○ (Step 2) IND Submission and Expansion of Platform Application <ul style="list-style-type: none"> - Establish GMP-grade manufacturing and QC systems and finalize CMC documentation(analytical methods, specifications and stability) to support clinical entry - Submit the IND, obtain approval and identify additional anticancer candidates for expanded indications through the established modality platform
Need for Support	<ul style="list-style-type: none"> ○ (Policy) In line with the national bio-health strategy, this project strengthens global collaboration and builds technological self-reliance in next-generation anticancer therapeutics.

	<ul style="list-style-type: none"> ○ (Technical) High-complexity modalities such as ADC, TPD, and proximity inducers require advanced platform and production capabilities that are difficult for SMEs to achieve independently, necessitating government R&D support. ○ (Market) The global anticancer modality market is rapidly expanding (e.g., TPD > 20% CAGR, ADC \approx 18% CAGR), calling for early investment to close the technology gap and enhance domestic competitiveness in global markets. ○ (Social) Innovative treatments addressing high unmet needs in oncology can significantly improve patient quality of life while fostering industrial growth and job creation in the domestic biopharmaceutical sector.
Performance Target	<ul style="list-style-type: none"> ○ (Step 1) Derive 1–2 candidate molecules, complete preclinical efficacy and safety validation, and secure a nonclinical IND filing-ready data package ○ (Step 2) Establish manufacturing and QC systems and compile the CMC/regulatory dossier, submit the IND and obtain approval. Identify additional anticancer candidates for expanded indications through the established modality platform ○ (After completion) Execute one or more global co-development or technology-transfer contracts(including LO), and establish modular platform technologies accessible to multiple domestic/global companies (≥ 2 firms)