

Pre-clinical Studies and IND Approval of First-in-class Cancer Stemness Blocking Anti-Cancer Agent, PMB212



ONCOLOGY	Non-Clinical
Product Type	Chemical Product
Indication	Resistant Cancer
Target	Undisclosed Target
MoA(Mechanism of Action)	PMB212 inhibits a novel target protein that control most of the major pathways related to induction and enhancement of cancer stemness.
Competitiveness	To date, many efforts have been made in discovery and development of drug candidates for controlling cancer stemness or cancer stem cells. Among them, only HedgeHog inhibitors (Gladegib, Sonidegib, Vismodegib) have been approved for this purpose in limited indications and many others targeting a specific pathway that are highly important for cancer stemness have been failed. We thought that the failures were from heterogeneity of cancer. Namely, stemness of each cancer cell might be caused by different pathways. Thus, we selected a novel target protein that control most of the major pathways related to induction and enhancement of cancer stemness, and carried out candidate discovery, resulting in PMB212 as the first-in-class drug candidate for the target. It was confirmed that PMB212 could block the pathways related to cancer stemness such as wnt, notch, hedgehog, STAT3, NF-kb, BMI-1, Hippo pathways among others and downregulate cancer stemness markers and ABC transporters. Moreover, it showed anti-cancer efficacy in animal models.
Development Stage	Non-Clinical
Route of Administration	Intravenous Infusion