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Development of the first-in-class anti-cancer leading compounds blocking growth factor receptors based on the mechanism of target-protein degradation

Vaxcell-Bio

VAXCELL

ONCOLOGY | **Lead**

Product Type	TPD
Indication	TKI-resistant or anti-EGFR antibody-resistant solid cancers expressing mutant growth factor receptors (tyrosine kinase receptors)
Target	Primary target: molecular motor MYO1D; Final target: wild-type & mutant growth factor receptors, such as EGFR, Her2, c-Met, VEGFR1, and VEGFR2; Molecule binding protein: Ecm29
MoA(Mechanism of Action)	The molecular motor MYO1D holds wild-type and mutant GFRs in the plasma membrane. MYO1D inhibitor (MYO1Di) binds with Ecm29 to recruit MYO1D to the Ecm29/E3-ligase/26S proteasome complex for degrading MYO1D like a molecular glue, and thereby leads to disintegration of several GFRs, such as EGFR, HER2, c-Met, and VEGFR1&2 from plasma membrane and subsequent their degradation, which finally block the generation of the GFR-induced oncogenic signals.
Competitiveness	This first-in-class compound could be used as a novel combinatorial therapeutic agent with existing anti-cancer agents to suppress the progression of solid tumors, which showed therapeutic resistance to existing TKI or corresponding monoclonal antibody agents due to expression of mutant growth factor receptors.
Development Stage	Lead
Route of Administration	IV/PO