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Polo-like kinase 1(PLK1) degradation using the N-degron pathway in PROTACs and its application of developing to non-small cell lung cancer(NSCLC) target drug candidates

DandiCure.Inc

단디큐어

ONCOLOGY | **Candidate**

Product Type	Synthetic medicine (peptidomimetic)
Indication	RAS mutation/p53 mutation cancer and EGFR mutation
Target	Non Small Cell Lung Cancer(NSCLC)
MoA(Mechanism of Action)	1. PROTAC is a new mechanism of action that degrades target proteins by the ubiquitin/proteasome system, unlike conventional drug actions. 2. A new ubiquitin system using the N-end rule pathway via Arg as a ligand of E3 ligase. 3. As a target protein (POI), it targets Polo like kinase 1, which is essential for the survival of non-small cell lung cancer, and specifically targets the Polo box domain, a non-ATP binding site, to solve the selectivity problem.
Competitiveness	Big pharmaceutical company, Boehringer Ingelheim is conducting a phase 2 clinical trial for non-small cell lung cancer for PLK1, but it is not PROTAC technology. Avinas in the U.S. entered phase 3 clinical trials targeting prostate cancer using PROTAC technology.By targeting polo like kinase 1, an essential protein for the survival of non-small cell lung cancer, it is possible to expand not only specific genetic mutations (EGFR) but also various mutations. A drug targeting the Polo box domain (PBD), the non-ATP binding site of PLK1, solves the selectivity problem. PORTAC-based technology that degrades target proteins is expected to solve drug toxicity and resistance problems.
Development Stage	Candidate
Route of Administration	IV or Oral

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