Technology/	DBPR728 — A Kinase Inhibitor Targeting MYC Driven Cancers			
Title				
Subtitle	A precision medicine strategy for cancers			
Technology	Biotechnology	Device/Diagnostics		
Туре	Pharmaceutical			
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Technology Description	 DBPR728 is an oral-available novel Aurora kinase inhibitor which was selected based on its potency to reduce levels of c-MYC and N-MYC oncoproteins. DBPR728 efficiently induces cell apoptosis and inhibits proliferation of several cancer cell lines. Head-to-head comparison of DBPR728 with the phase II investigational drug alisertib demonstrated superiority of DBPR728 on the regression or suppression of multiple tumor xenografts (e.g. small cell lung cancer, triple-negative breast cancer, liver cancer, pancreatic cancer, medulloblastoma) overexpressing c-MYC and/or N-MYC. In addition, oral administration of DBPR728 at 300 mpk once a week or 200 mpk twice a week showed similar tumor regression potency, as compared to the dosage of 100 mpk 5W for 2 weeks. DBPR728 also showed synergy with everolimus (an mTOR inhibitor) in regressing MYC-overexpressing small cell lung cancer tumor xenografts. No significant hematological toxicity was observed in mice receiving DBPR728 at 100 mpk 5W for 14 days or 300 mpk QW for 3 weeks. A PCT international patent treaty (WO 2021/178485) has been filed for this technology. COMPETITIVE ADVANTAGES Deregulation of MYC is frequently associated with poor prognosis and unfavorable patient survival. DBPR728 was designed based on its potency to reduce levels of c-MYC and N-MYC oncoproteins in addition to its inhibitory activity to Aurora kinases. DBPR728 is superior to alisertib in degrading c-MYC oncoprotein in the tumor xenografts. Amplification or overexpression of c-MYC/N-MYC can serve as a biomarker for selection of patients who are potentially responsive to DBPR728. 			
Intellectual	PCT filed on March 3, 2021			
Property				
	1. https://pubs.acs.org/doi/10.1021/acs.jmedchem.0c01806			
Кеу	2. <u>https://aacrjournals.org/r</u>	ttps://aacrjournals.org/mct/article-		
Publications	abstract/23/6/766/745468/Discovery-of-a-Long-Half-Life-AURKA-			
	Innibitor-to?redirectedFrom=fulltext			
Business	Patent licensing, co-development			
Opportunity				



- Oral administration of DBPR728 showed better tumor suppression efficacy than alisertib in multiple tumor xenografts overexpressing c-MYC and/or N-MYC. ٠
- A PCT has been filed for this technology (WO 2021/178485).