

Technology/ Title	DBPR728: An Aurora kinase inhibitor for precision targeting of MYC-amplified solid tumors (A precision medicine strategy for cancers genetically addicted to MYC)	
Technology Type	<input type="checkbox"/> Biotechnology	<input type="checkbox"/> Device/Diagnostics
	<input checked="" type="checkbox"/> Pharmaceutical	<input type="checkbox"/> Others: _____ -
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Technology Description	<p>DBPR728 is an oral-available novel Aurora kinase inhibitor which was selected based on its potency to reduce levels of MYC oncoproteins. DBPR728 efficiently induces cell apoptosis and inhibits proliferation of several cancer cell lines with $IC_{50} < 300$ nM. Head-to-head comparison of DBPR728 with the phase II investigational drug MLN8237 demonstrated superiority of BPR6K728 on the regression (>80% at 100 mpk QD 5 days/wk for 2 weeks) of small cell lung cancer (SCLC) xenografted tumors (NCI-H446 and NCI-H69) in mice. 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 QD 5 days/wk for 2 weeks. In addition to SCLC, DBPR728 has demonstrated significant tumor growth inhibition, or tumor regression, in xenograft tumors (e.g. hepatocellular carcinoma, neuroblastoma, medulloblastoma, pancreatic cancer) that have acquired MYC. No significant body weight loss was observed in animals oral administered with either 100 mpk or 200 mpk DBPR728 for 14 consecutive days. A PCT international patent treaty has been filed for this technology.</p> <p>COMPETITIVE ADVANTAGES</p> <ul style="list-style-type: none"> ➤ Deregulation of MYC is frequently associated with poor prognosis and unfavorable patient survival. DBPR728 was designed based on its potency to reduce levels of MYC oncoproteins in addition to its inhibitory activity to Aurora kinases. ➤ DBPR728 is superior to MLN8237 in inducing degradation of MYC oncoprotein in SCLC cell lines, as well as in the xenograft tumors. ➤ MYC amplification can serve as a biomarker for selection of patients who are potentially responsive to DBPR728. 	
Intellectual Property	PCT filed on March 3, 2021	
Key Publications	https://pubs.acs.org/doi/10.1021/acs.jmedchem.0c01806	
Business Opportunity	Patent licensing, co-development	