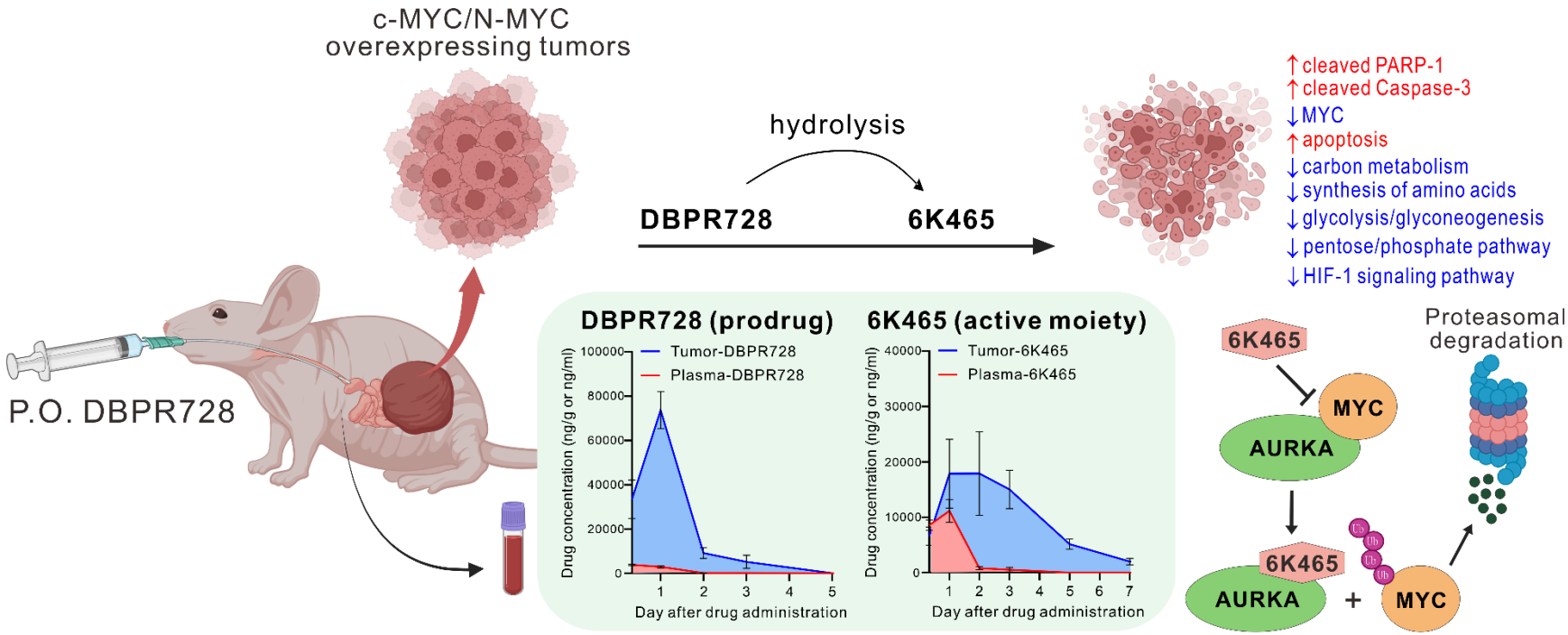
DBPR728: A Kinase Inhibitor Targeting MYC Driven Cancers



Advantages

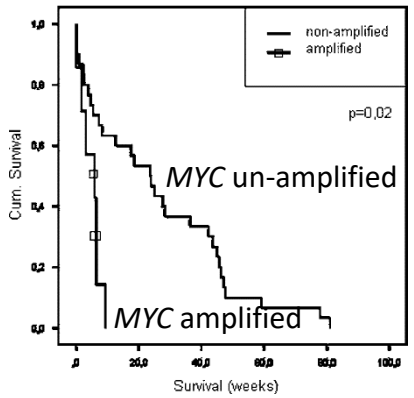
- Oral administration of DBPR728 showed better tumor suppression efficacy than alisertib in multiple tumor xenografts overexpressing c-MYC and/or N-MYC.
- A PCT has been filed for this technology (WO 2021/178485).

Publications associated with this patent:

Disease Background and Market Analysis

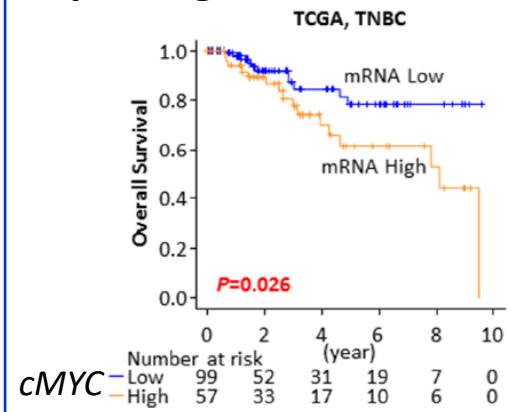
- **Cancers with MYC amplification/overexpression (28% amongst all cancers): reduced overall survival across cancers, no available targeted therapy**

Small cell lung cancer



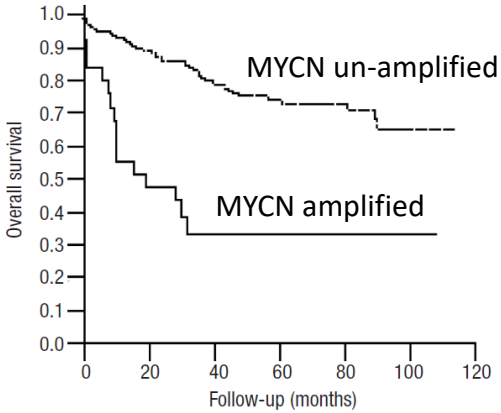
Alves et al. (2014) *J. Can. Res. Clin. Onco.*

Triple negative breast cancer



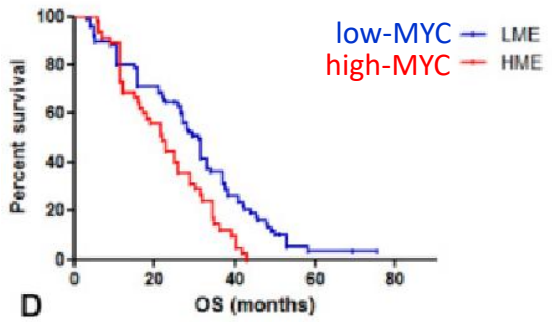
Katsuta et al. (2020) *IJMS*

Neuroblastoma



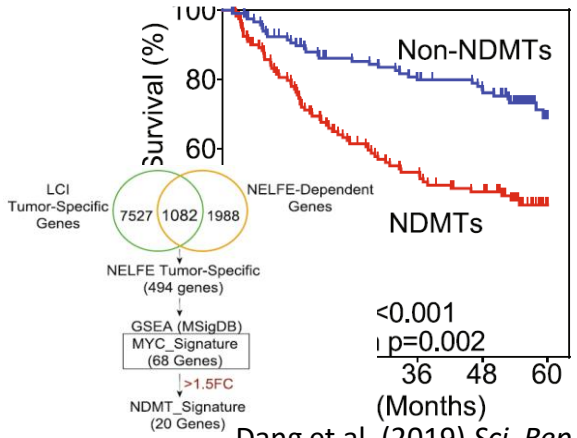
Castel et. al. (2007) *Clin. Transl. Oncol.*

Colorectal cancer



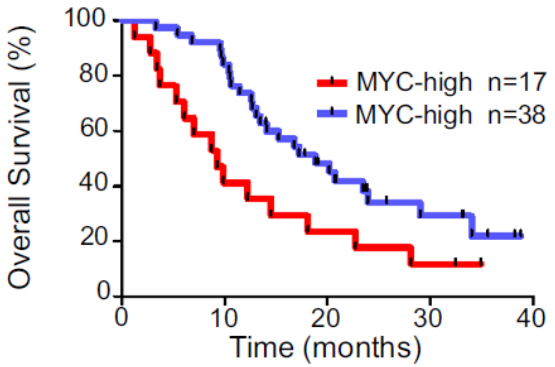
Strippoli et al. (2020) *Cancers*

Liver cancer



Dang et al. (2019) *Sci. Rep.*

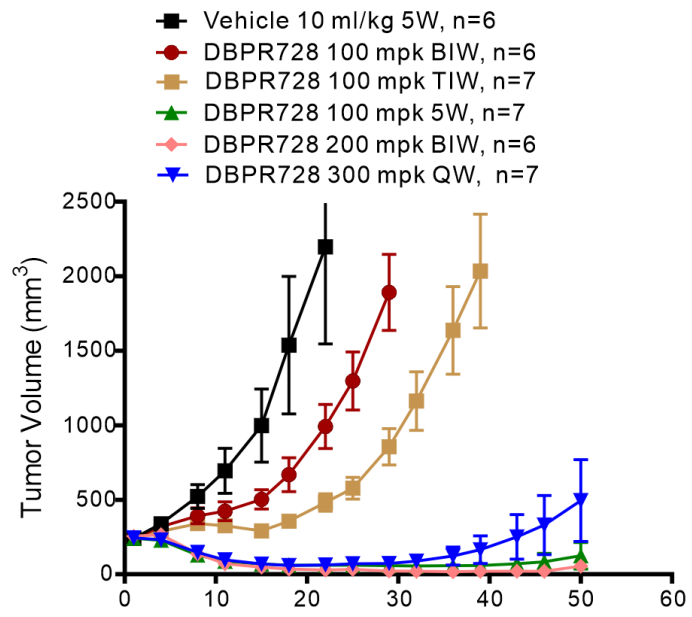
Pancreatic cancer



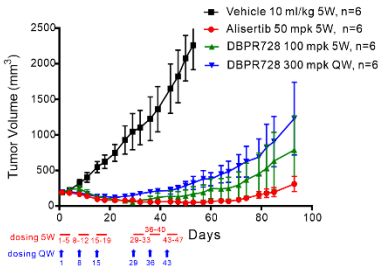
Bian et al. (2017) *EMBO Mol. Med.*

Product – Key Data or PoC Data

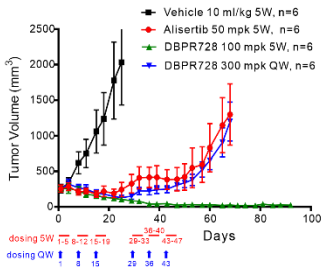
NCI-H446, SCLC, *c-MYC* amplified



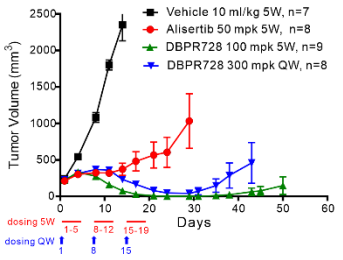
NCI-H146 (SCLC, *c-MYC* unamplified)



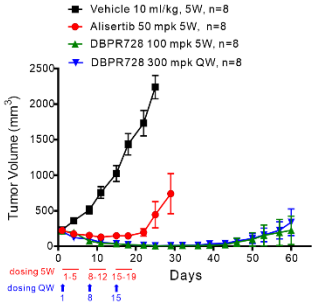
NCI-H69 (SCLC, *N-MYC* amplified)



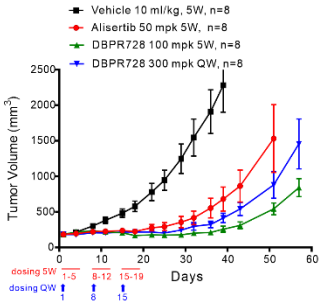
D341 (Medulloblastoma, *c-MYC* Amp)



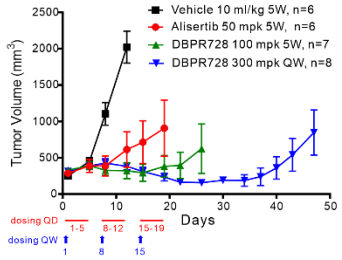
HCC1187 (TNBC, c-MYC & N-MYC OE)

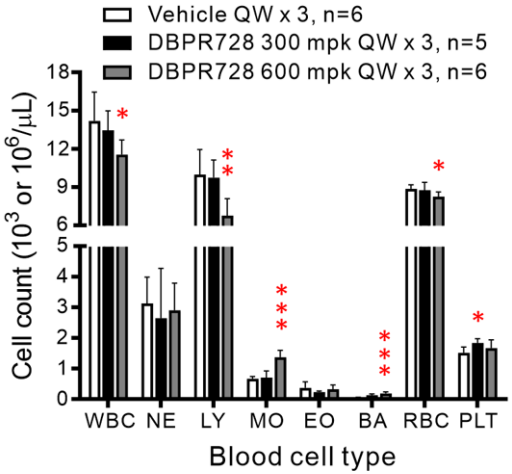


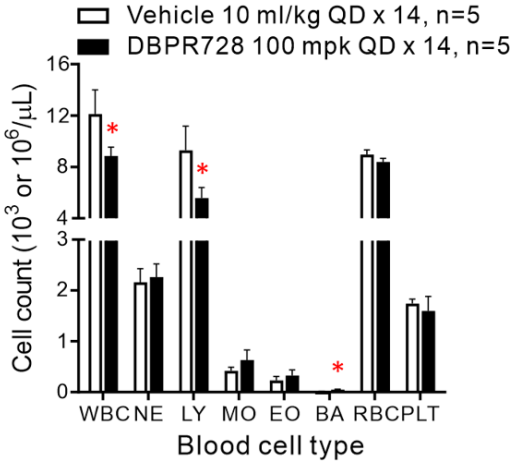
MDA-MB-231 (TNBC, c-MYC OE)

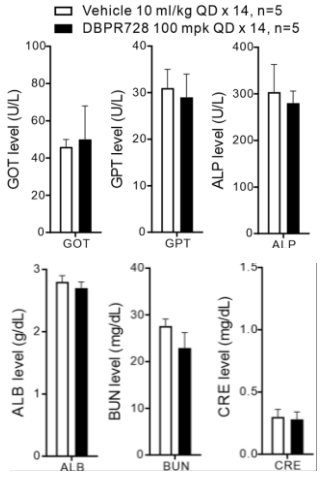


SNU-398 (HCC, *c-MYC* OE)

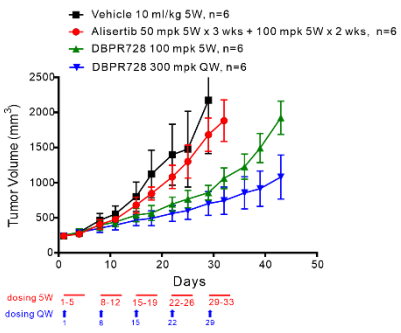




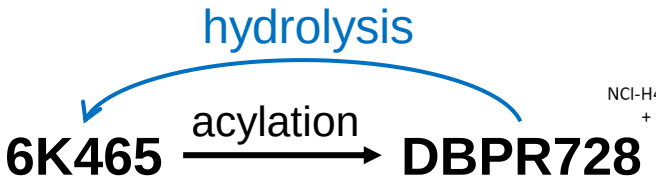




PSN-1 (pancreatic cancer, *c-MYC* Amp)

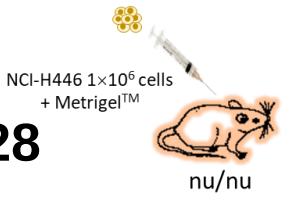


Product – Key Data or PoC Data

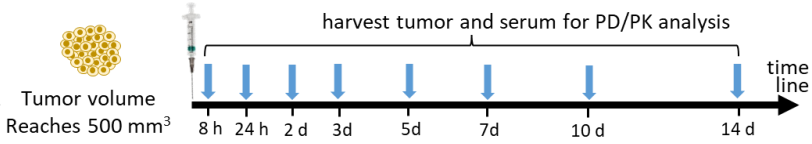


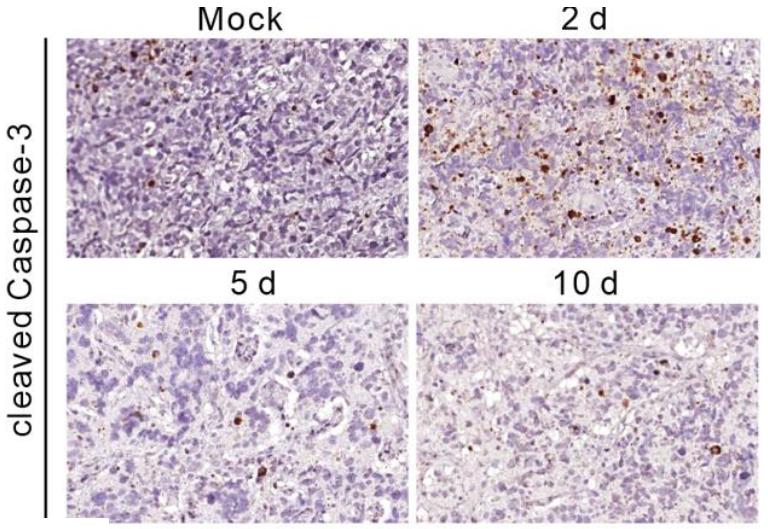
Compound (IV)	$T_{1/2}$(hr)	CL (ml/min/kg)	V_{ss} (l/kg)	$AUC_{(0\text{-}inf)}$ (ng/ml * hr)
6K465	4.6± 0.4	43.3± 0.5	9.5± 0.9	774± 10
DBPR728 (6K465 determined)	7.5± 1.1	15.2± 1.0	4.1 ± 0.5	2231± 148

Compound (PO)	$T_{1/2}$(hr)	C_{max}(ng/ml)	T_{max}(hr)	$AUC_{(0\text{-}inf)}$ (ng/ml*hr)	F ratio (%)
6K465	12.6± 0.8	124± 53	1.0± 0.0	567± 16.8	14.6
DBPR728	1.8± 0.0	126± 25.7	0.25± 0.0	453± 119	ND
DBPR728 (6K465 determined)	3.6± 0.2	1370± 17	2.0 ±0.0	5931± 276	53.1

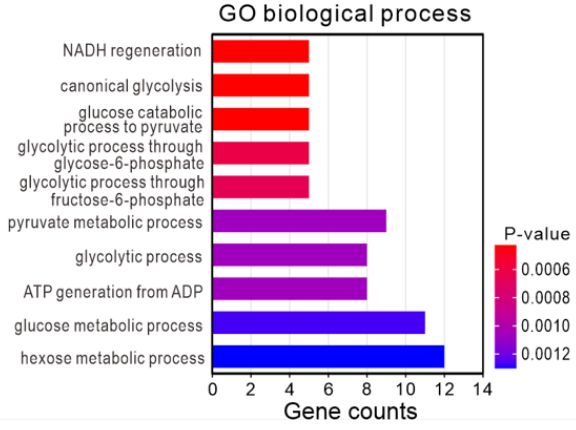


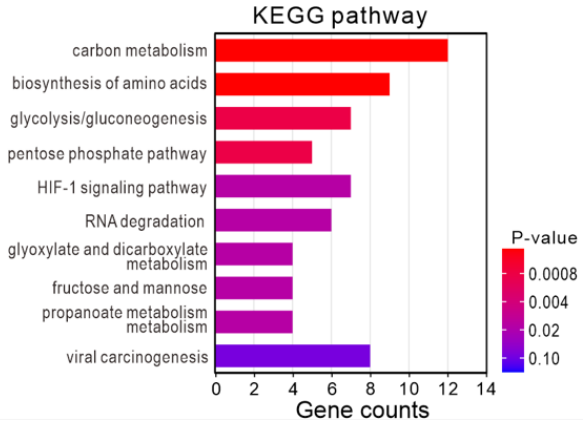
PO DBPR728 300 mpk

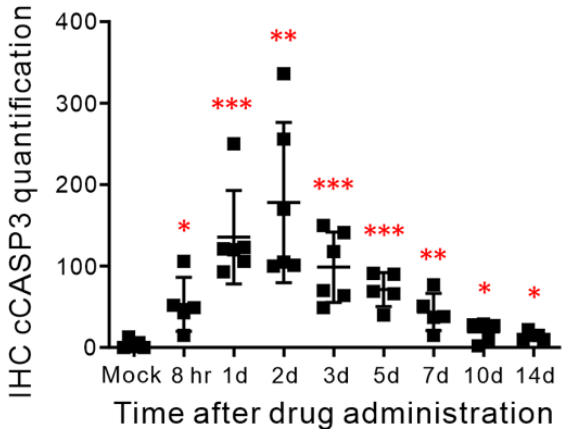




Genes affected by DBPR728 treatment







Product Summary of DBPR728

- **Primary Indications:** SCLC, TNBC with c-MYC or N-MYC amplification or overexpression
- **Key Features:**

— oral-available, degrades both c-MYC and N-MYC

— long elimination half life, regress/eradicates multiple tumor xenografts (SCLC, BC, medulloblastoma, HCC) with QD or QW dosing regimen in a 21-day cycle

— tumor/plasma exposure about 3.6 fold, manageable hematology toxicities

- **Intellectual Properties:** PCT WO 2021/178485 (March 3, 2021); Entry countries (US, Canada, China, Japan, Korea, Europe, Australia, New Zealand)
- **Market Positioning:** preclinical
- **Business Opportunities:** licensing, co-development