



DBPR117: A precision medicine (mAb) targeting RSPO3/Wnt signaling and PD-1 blockade efficacy

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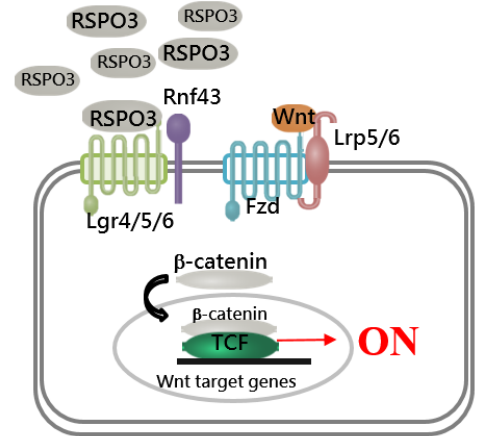
Institute of Biotechnology and Pharmaceutical Research
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Disease Background and Market Analysis

Several lines of evidence supported that anti-RSPO3 antibody is effective in treating cancers with RSPO3 dysregulation.

Targeting RSPO-LGR signaling will inhibit cancer stemness

- Decreased self-renew and differentiate into cancer cells
- Decreased tumorigenicity
- Decreased resistance to chemotherapy



Market Niche I **\$1, 300**

CRC (mtKRAS)

Incidence : 50% of CRC
genotype : KRAS^{G12C}
RSPO3^{high}



Treatment options	Response Rate	PFS	Resistance development
Trametinib	26%	8.7 mos	High



Market Niche II **\$2, 500**

- Pembrolizumab for the Treatment of Patients with Unresectable or Metastatic Melanoma



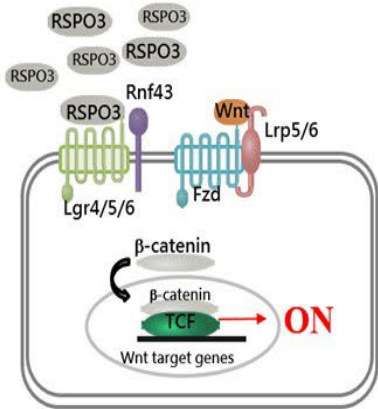
Treatment options	Response Rate	PFS	Resistance development
pembrolizumab	34.2%	5.7 mos	High



2030 forecast in US\$ millions for the seven major markets: the United States, France, Germany, Italy, Spain, United Kingdom and Japan.

Product Mechanism of Action and Key POC Data

-DBPR117



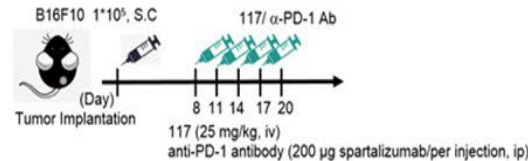
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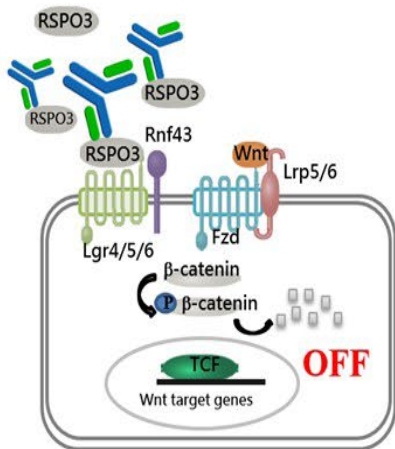
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Market Niche II

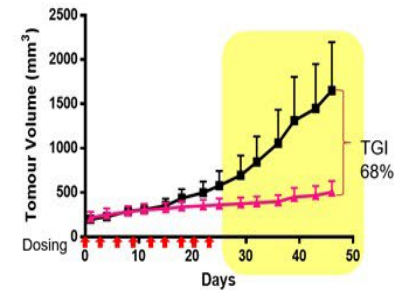
Wnt/β-catenin pathway and immune activation – clinical correlation



+DBPR117

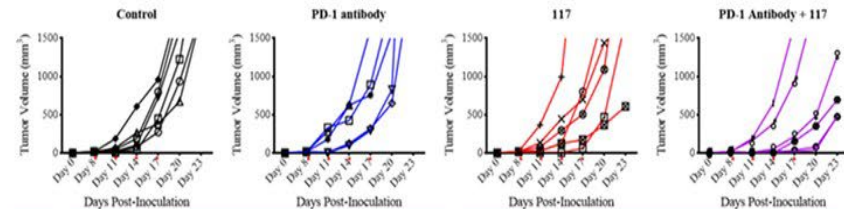
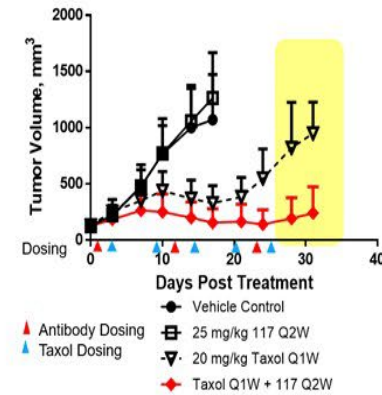


CR3150 PDX model
(PTPRKe1-RSPO3e2, KRAS^{G12V})

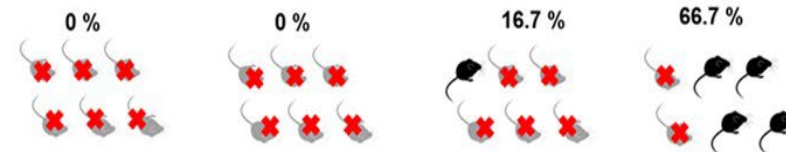


BIW*2, i.p. | ■ Group 01 Vehicle(PBS), 0 mg/kg
 ◆ Group 02 DBPR117, 25 mg/kg

SNU-1411 CDX model
(PTPRKe13-RSPO3e2, KRAS^{G12C})



Overall Survival Rate on day 23



DBPR117 can turn the cold B16-derived tumors hot (no longer inert to PD1 blockade).

Competitor Landscape Analysis

(Target Product Profiles)

Pharmacology (In-house platform)	131R010 (Rosmantuzumab) Reference drug	DBPR117		
Product description	α -RSPO3 Ab	α -RSPO3 Ab		
Indication & Target Patient	CRC, ovarian cancer	Advanced relapsed tumor, refractory solid tumors		
Preclinical Data				
<i>in vitro</i> assay				
Inhibition of β -Catenin activity (nM)	58.7	58.0		
Antibody Engineering	affinity maturation Humanization	Humanization		
kon (1/Ms)	7.64+06	1.12E+07	2.58E+06	8.31E+05
koff (1/s)	1.82E-04	1.80E-04	3.56E-05	3.31E-05
Affinity constants (KD), M	2.39E-11	1.61E-11	1.38E-11	3.98E-11
<i>in vivo</i> anti-tumor efficacy				
Colon cancer PDX model: PTPRK(e1)-RSPO3(e2) fusion, TGI (%)	71.0	60.8		
NCI-H2030 Lung cancer CDX model: RSPO3 ^{high}	No difference vs carboplatin alone	P<0.05 vs. Control. better than carboplation alone		
SNU-1411 Colon CDX model: PTPRK(e13)-RSPO3(e2) fusion	combination therapy better than Taxol alone	combination therapy better than Taxol alone		
B16F10 syngeneic model	combination therapy better than PD-1 Ab alone	combination therapy better than PD-1 Ab alone		
Route of Administration	<i>i.v</i>	<i>i.v</i>		
Highest_Clin_Trial	I (Completed)	-		
Adverse Reactions				
Intellectual Property				

Product Summary including IP and publication

Key Feature

- DBPR117 is a potent anti-RSPO3 monoclonal antibody targeting RSPO/WNT signaling pathways for the treatment of advanced, relapsed or refractory solid tumors
- DBPR117, alone or in combination with taxane-based agents, can be used to treat **cancers with RSPO3-fusion / overexpression**.
- DBPR117 in **combination with anti-PD1 antibody** can be used to treat anti-PD1 antibody non-responsive patients

Intellectual properties

- US, ROC (Taiwan) and PCT
Granted: PCT/US2018/064236, WO2019113306 A2

Market Positioning

- By emphasizing DBPR117's targeted **therapeutic approach, combination therapy potential, diagnostic applications, imaging capabilities, and potential for personalized medicine**, its market positioning can effectively communicate its unique value proposition in the treatment and diagnosis of RSPO3-driven cancers.

Business Opportunities

- License and or collaboration and sponsored research