

Supplementary information

The *MYC* oncogene – the grand orchestrator of cancer growth and immune evasion

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Supplementary Table 1 | Approaches currently evaluated in clinical trials to target MYC or MYC synthetic lethal interactions

Mechanism	Drug	Combination	Trial phase	Trial number ^a	Status ^b	
Inhibition of MYC transcriptional activity						
Dominant negative inhibition of MYC–MAX dimerization and MYC–DNA binding	Omo-103	N/A	I/II	NCT04808362	Not yet recruiting	
Silencing of MYC gene expression						
Prevention of bromodomain and extra-terminal motif (BET) proteins interaction with histones and transcription factors	Pelabresib	Ruxolitinib	III	NCT04603495	Recruiting	
	ZEN-3694	Enzalutamide, pembrolizumab	II	NCT04471974	Recruiting	
		Talazoparib	II	NCT03901469	Recruiting	
	BMS-986158	Nivolumab	I/II	NCT02419417	Active, Not recruiting	
	CC-90010	Temozolomide	I/II	NCT04324840	Recruiting	
		N/A	I/II	NCT04047303	Active, Not recruiting	
		Standard platinum-based chemotherapy, etoposide, nivolumab	I/II	NCT03850067	Recruiting	
	ABBV-744	Navitoclax, ruxolitinib	I	NCT04454658	Recruiting	
	BI 894999	N/A	I	NCT02516553	Recruiting	
Mivebresib	Navitoclax, ruxolitinib	I	NCT04480086	Recruiting		
PLX51107	Azacitidine	I	NCT04022785	Recruiting		
Stabilizes G4 quadruplexes	APTO-253	N/A	I	NCT02267863	Recruiting	
	CX5461	N/A	I	NCT02719977	Active, Not recruiting	
Inhibiting MYC protein biosynthesis						
Inhibitors of the mechanistic target of rapamycin (mTOR) pathway	Everolimus	STZ-5FU	III	NCT02246127	Recruiting	
	Paxalisib	N/A	II/III	NCT03970447	Recruiting	
	ATG-008	N/A	II	NCT03591965	Recruiting	
	Gedatolisib	Trastuzumab biosimilars	II	NCT03698383	Recruiting	
	Samotolisib	Prexasertib		II	NCT04032080	Recruiting
		N/A		II	NCT03213678	Recruiting
		N/A		II	NCT03155620	Recruiting
		N/A		II	NCT02549989	Active, Not recruiting

	Sapanisertib	N/A	II	NCT02465060	Recruiting
		Paclitaxel	II	NCT03648489	Recruiting
		N/A	II	NCT03097328	Recruiting
		N/A	II	NCT02244463	Recruiting
	Apitolisib	Abiraterone, prednisone	I/II	NCT01485861	Recruiting
Inhibits eukaryotic initiation factor-4A (eIF4a)	Zotatifin	N/A	I/II	NCT04092673	Recruiting
Targeting MYC for proteasomal degradation					
Inhibitors of Polo-like kinase 1 (PLK1)	Onvansertib	Abiraterone, prednisone	II	NCT03414034	Recruiting
		Nanoliposomal irinotecan, leucovorin, fluorouracil	II	NCT04752696	Not yet recruiting
		Bevacizumab, FOLFIRI	I/II	NCT03829410	Recruiting
		Cytarabine or decitabine	I/II	NCT03303339	Active, Not recruiting
	CYC140	N/A	I	NCT03884829	Unknown, estimated completion data February 28, 2021
Inhibitors of Aurora A kinase	Alisertib	N/A	II	NCT02114229	Recruiting
		Paclitaxel	II	NCT02187991	Active, Not recruiting
		N/A	II	NCT02293005	Active, Not recruiting
		Pembrolizumab	I/II	NCT04555837	Recruiting
Targeting MYC synthetic lethal interactions					
Inhibition of SUMO-activating enzyme 1/2 (SAE1/2)	TAK-981	N/A	I/II	NCT03648372	Recruiting
		Pembrolizumab	I/II	NCT04381650	Recruiting
		Rituximab	I/II	NCT04074330	Recruiting
		Mezagitamab, Daratumumab, Hyaluronidase-fihj	I/II	NCT04776018	Not yet recruiting
Inhibition of cyclin-dependent kinases 1/4/9 (CDK1/4/9)	Rivaciclib	Acalabrutinib	I/II	NCT04630756	Recruiting
		N/A	I	NCT03263637	Recruiting
Inhibition of cyclin-dependent kinase 4/6 (CDK4/6)	Abemaciclib	Endocrine therapy	IV	NCT04707196	Recruiting
	Palbociclib	Letrozole	IV	NCT04137640	Not yet recruiting
		Endocrine therapy	IV	NCT03355157	Recruiting

		Endocrine therapy and eHealth support	IV	NCT03220178	Recruiting
	Dalpiciclib	Letrozole, anastrozole	III	NCT03966898	Recruiting
		Fulvestrant	III	NCT03927456	Not yet recruiting
	Ribociclib	N/A	III	NCT04055493	Recruiting
		Endocrine therapy	III	NCT03701334, NCT03905343, NCT03425838, NCT02344472	Recruiting
		Letrozole, alpelisib, fulvestrant	III	NCT03439046	Active, Not recruiting
		Endocrine therapy, chemotherapy, bevacizumab	III	NCT03462251	Active, Not recruiting
		Letrozole	III	NCT02941926	Active, Not recruiting
		Fulvestrant	III	NCT02422615	Active, Not recruiting
		Tamoxifen, letrozole, anastrozole, goserelin	III	NCT02278120	Active, Not recruiting
		Letrozole	III	NCT01958021	Active, Not recruiting
	Trilaciclib	Gemcitabine, carboplatin	III	NCT04799249	Not yet recruiting
		N/A	III	NCT04607668	Recruiting
Inhibition of cyclin-dependent kinase 7 (CDK7)	Samuraciclib	N/A	I/II	NCT03363893	Recruiting
	SY-5609	Fulvestrant	I	NCT04247126	Recruiting
Inhibition of cyclin-dependent kinase 9 (CDK9)	Alvocidib	Cytarabine	II	NCT03969420	Active, Not recruiting
		Decitabine, azacitidine	I/II	NCT03593915	Active, Not recruiting
	KB-0742	N/A	I	NCT04718675	Recruiting
	TP-1287	N/A	I	NCT03604783	Recruiting
Inhibition of checkpoint kinase 1 (CHK1)	Prexasertib	LY3023414	II	NCT04032080	Recruiting
		Irinotecan, temozolomide	I/II	NCT04095221	Recruiting
		N/A	II	NCT03414047, NCT02873975, NCT02203513	Active, Not recruiting
Inhibition of ataxia telangiectasia and Rad3-related kinase (ATR)	Berzosertib	Irinotecan	II	NCT03641313	Recruiting
		Topotecan	II	NCT03896503	Recruiting

		Carboplatin, gemcitabine, pembrolizumab	I/II	NCT04216316	Recruiting
		Avelumab	I/II	NCT04266912	Recruiting
		Topotecan	II	NCT04768296	Not yet recruiting
		Gemcitabine	II	NCT04807816	Not yet recruiting
		Lurbinectidin	I/II	NCT04802174	Not yet recruiting
		Carboplatin, docetaxel	II	NCT03517969	Active, Not recruiting
		Gemcitabine	II	NCT02595892	Active, Not recruiting
		Cisplatin, gemcitabine	II	NCT02567409	Active, Not recruiting
		N/A	II	NCT03718091	Active, Not recruiting
	Ceralasertib	N/A	II	NCT04564027	Active, Not recruiting
		Acalabrutinib	II	NCT03328273	Active, Not recruiting
		Durvalumab	II	NCT03780608	Active, Not recruiting
		Olaparib	II	NCT03330847, NCT02937818, NCT02576444	Active, Not recruiting
	M4344	Niraparib	I/II	NCT04655183	Not yet recruiting
	Elimusertib	Pembrolizumab	I	NCT04095273	Recruiting
		N/A	I	NCT03188965	Recruiting
		Radiotherapy, pembrolizumab	I	NCT04576091	Not yet recruiting
		Fluorouracil, irinotecan, leucovorin	I	NCT04535401	Not yet recruiting
		Gemcitabine	I	NCT04616534	Not yet recruiting
		Gemcitabine, cisplatin	I	NCT04491942	Not yet recruiting
Irinotecan, topotecan		I	NCT04514497	Not yet recruiting	
Inhibition of protein kinase, DNA-activated, catalytic subunit (PRKDC)	Peposertib	Radiation therapy	I/II	NCT04172532	Recruiting
		Radiotherapy, avelumab	I/II	NCT04071236, NCT04068194	Recruiting
		Capecitabine, radiotherapy	I/II	NCT03770689	Recruiting
Inhibition of myeloid leukaemia cell differentiation protein 1 (MCL1)	ABBV-467	N/A	I	NCT04178902	Recruiting
	AZD5991	Venetoclax	I/II	NCT03218683	Recruiting
	Tapotoclax	N/A	I	NCT02675452	Recruiting

	PRT1419	N/A	I	NCT04543305	Recruiting
	S64315	Azacitidine	I	NCT04629443	Recruiting
		Venetoclax	I	NCT03672695	Recruiting
		Azacitidine	I/II	NCT04629443	Not yet recruiting

^aTrials registered at www.clinicaltrials.gov.

^bStatus information collated on 29 March 2021. For inhibitors that are investigated in multiple clinical trial phases, only the most advanced trials are listed.