ALK	Aurora kinase	BIRC5	CHK1
• Target expressed in tumour samples (protein & mRNA levels), activating mutations and amplification present in tumour tissue. • ALK activates MAPK, JAK/STAT andPI3K AKTpathways; ALK interacts and regulates MYCN. ALK accelerates MYCN-induced neuroblastoma but on its own does not induce tumour formation. • *In vitro* and *in vivo* efficacy data (in xenografts and GEMM) for crizotinib and other inhibitors. • *ALK* mutations and amplifications are proposed as predictive biomarkers. • Combination with chemotherapy and TORC1/2 inhibitors. • Resistance to crizotinib can be overcome by higher doses or combination with TORC1/2 inhibitors.	• mRNA over expression in tumour samples correlates with poor outcome. • AURKA is required for the growth of *MYCN* amplified neuroblastoma cells. • *In vitro* and *in vivo* efficacy data (xenografts and GEMM) for CCT137690 and MLN8237. • *MYCN* amplification suggested as potential predictive biomarker. • Potential combinations suggested with HDAC inhibitors (vorinostat).	• mRNA and protein over expression described. • Target validated *in vitro* with shRNA. • *In vitro* efficacy data for YM155. • Potential predictive biomarkers could be ABCB1 negativity (its over expression is a mechanism of resistance) or 17q gain.	• Target expressed in MYCN-driven neuroblastoma. • RNAi target validation. • *In vitro* and *in vivo* efficacy data for CCT244747, CCT245737, AZD7762 and MK-8776 (SCH 900776). • Data available about combination with chemotherapeutic DNA-damaging agents and WEE1 inhibitors.

mTORC1/2	BET	MEK	CDK4/6
• Pathway activation present in tumour samples. • Target validation with shRNA. • *In vitro* and *in vivo* efficacy data (in xenografts and GEMM) for torin, AZD8055 and rapalogues (TORC1 inhibitors alone); also dual PI3K/TORC inhibitors. • Predictive biomarker: MYCN-driven tumours. • Combinations with ALK inhibitors.	• BRD4 validated as target. • MYCN transcription can be disrupted by bromodomain inhibition. • *In vitro* and *in vivo* efficacy for JQ1 and GSK1324726A. • Potential predictive biomarker: *MYCN* amplification.	• Activating mutations rare at diagnosis but frequent at relapse (78%). • *In vitro* and *in vivo* efficacy data for selumetinib, trametinib and cobimetinib. • Potential predictive biomarker: activating mutations in the MAPK/MEK pathway.	• CCND1 and CDK4 amplification and over expression of CDK4 and CDK6 in neuroblastoma. • siRNA validation of the target *in vitro*. • *In vitro* and *in vivo* efficacy data for palbociclib and ribociclib.

Abbreviations: ALK – Anaplastic lymphoma kinase; GEMM – genetically engineered murine model.

Table 1: Available evidence summarized following the same criteria used at the NDDS workshop (presence of the target, *in vitro* and *in vivo* target validation, *in vitro* and *in vivo* pharmacological efficacy, availability of predictive biomarkers, potential combinations explored and resistance mechanisms. This table aims to summarize available evidence but is not a systematic review.