

Supplementary information S1 (table) | Targeting of fatty acid synthesis in cancer using functional genomics and genetics\*

Target	Targeting mechanism	Preclinical model	Effect	References
FASN	siRNA, shRNA, gene knockout	Colorectal, breast, prostate and hepatocellular carcinoma cell lines, xenografts, myr-Akt driven liver cancers	Reduction of proliferation, induction of apoptosis, reduction of tumour growth and metastasis formation (colorectal), reduction of drug resistance, inhibition of tumour development (liver)	[1-5] [6] [7] [8]
ACLY	siRNA, shRNA	Lung cancer cell lines, xenografts; multiple cancer cell lines	Reduction of tumour growth, induction of differentiation, inhibition of proliferation, induction of apoptosis	[9-11]
ACSS2	siRNA, shRNA, knockout	Breast and prostate cancer cell lines and xenografts; Genetic deletion in liver cancers driven by expression of SV40-Tag or expression of MYC and deletion of PTEN	Inhibition of proliferation and induction of cell death under metabolic stress, reduced tumour growth (breast, prostate); Inhibition of tumour formation (liver)	[12] [13]
ACC	siRNA	Prostate and breast cancer cell lines	Reduction of proliferation, Induction of apoptosis	[2] [3]
SCD	siRNA, shRNA	Colon cancer cell lines; Lung, gastric and liver cell lines and xenografts; breast and prostate cancer cell lines, prostate orthografts	Reduction in cell viability, tumour formation (liver); Reduction in cell migration and invasion, induction of apoptosis, inhibition of xenograft tumour growth; Inhibition of proliferation and induction of apoptosis, inhibition of orthotopic tumour growth (prostate)	[14] [15-17] [18]
SREBP1/2	siRNA, shRNA	Glioblastoma cell lines and xenografts	Induction of ER-stress in reduced serum conditions (rescued by oleic acid), inhibition of tumour growth	[19-21]
SCAP	shRNA	Glioblastoma cell lines and xenografts expressing EGFRvIII	Reduction of tumour growth in glioblastoma xenografts	[22]

\*Studies reporting the effect of targeting enzymes of the fatty acid biosynthesis pathway using genetic strategies. Targeting strategies include short interfering (si)RNA, short hairpin (sh)RNA and gene knockout. Preclinical models were cancer cell lines, xenografts of human cancer cells and genetically engineered mouse models.