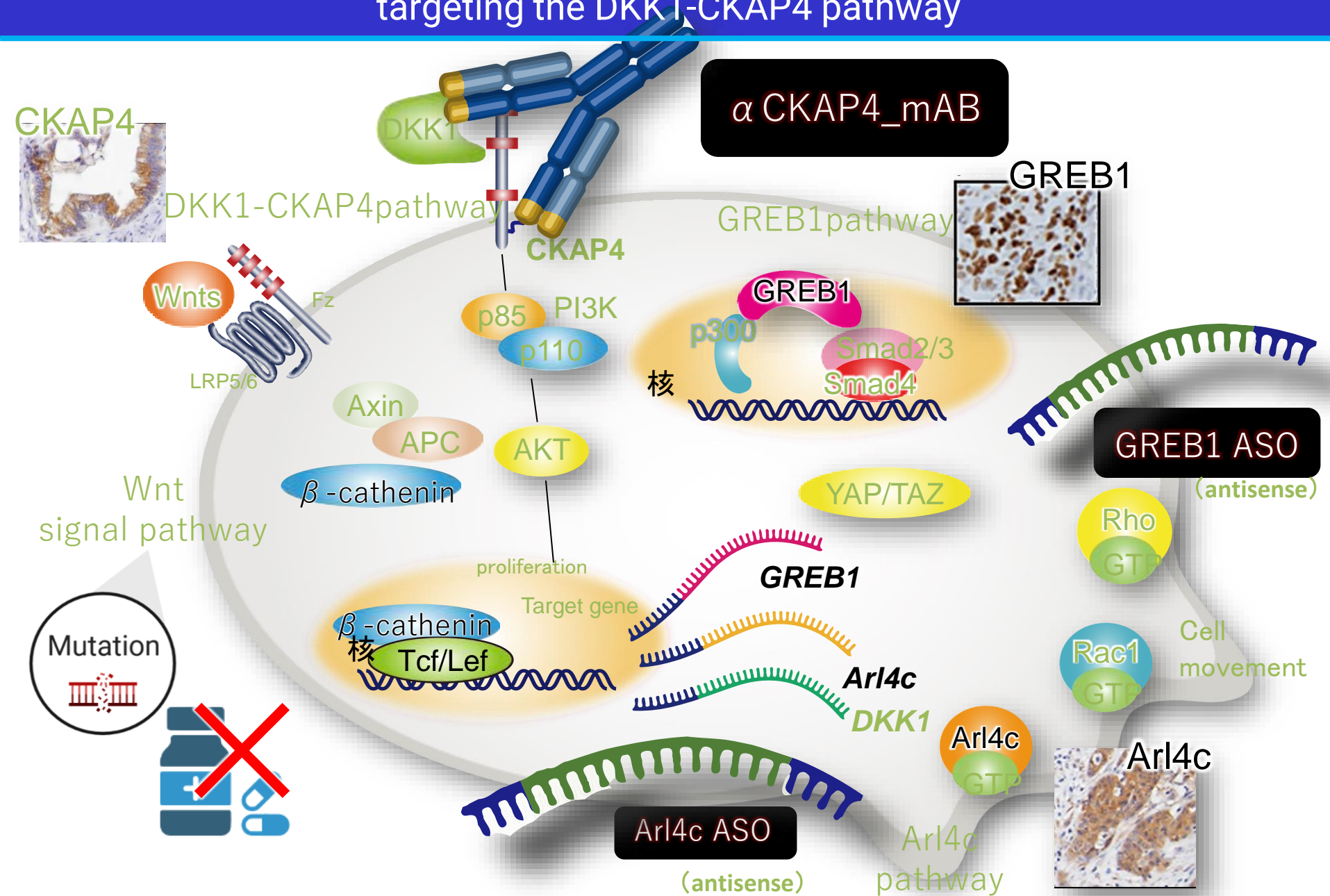


Antibody drug and nucleic acid drug candidates targeting the DKK1-CKAP4 pathway



Anti-cancer drug candidate : anti-CKAP4 antibody

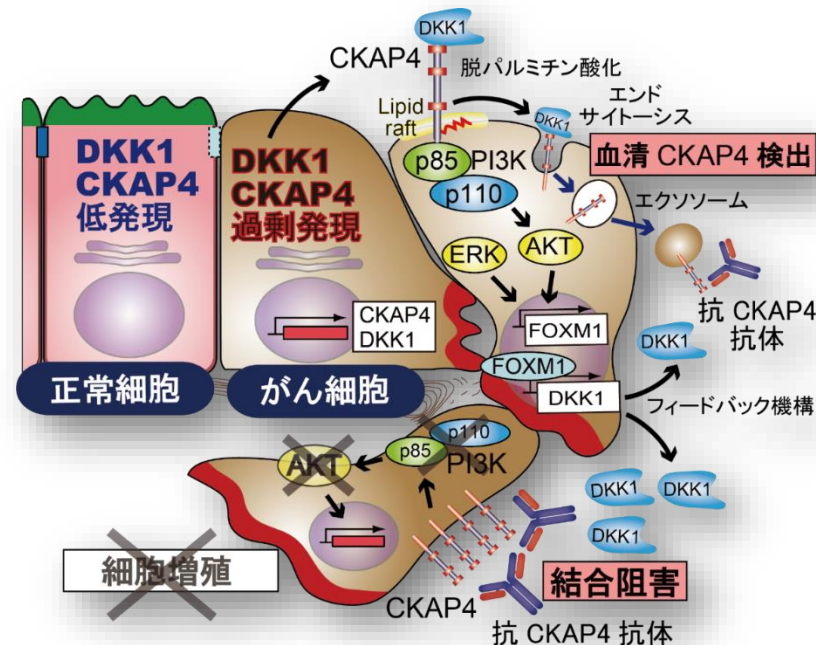
CKAP4: Discovered as a novel receptor for the long-unknown tumor growth-promoting secreted protein DKK1. Research on the DKK1-CKAP4 novel cancer signaling axis is still ongoing at Osaka University.

DKK1 activates AKT through binding of CKAP4 and PI3K to promote cell
Overexpression of DKK1 and CKAP4 is frequently observed in pancreatic, lung, esophageal, and liver cancers, correlated with poor prognosis

In vivo efficacy confirmed,
Now, humanized antibody is available

Anti-CKAP4 antibodies inhibit tumorigenesis of pancreatic, lung, esophageal, and liver cancers in mouse models
Humanized anti-CKAP4 antibody has already been produced, currently being analyzed for efficacy.

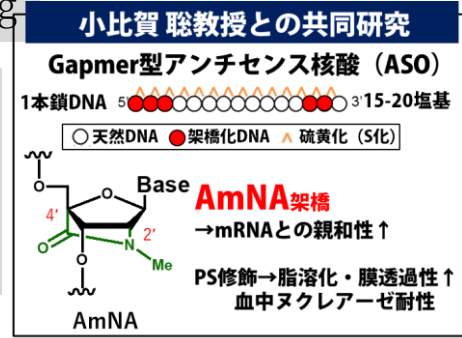
Not only licensing as an antibody drug, as well as joint research for synergistic effects evaluation
Samples can be provided for trial evaluation (for a fee).



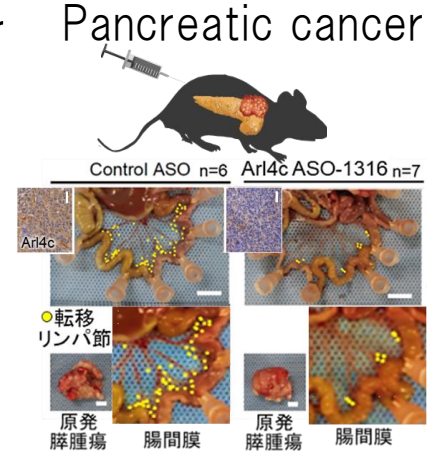
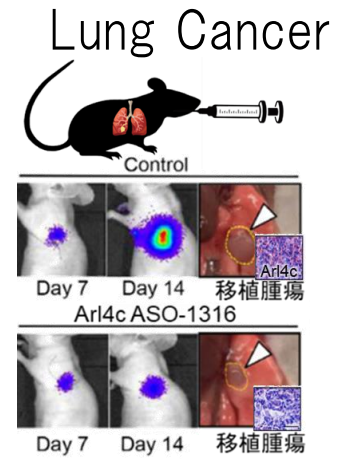
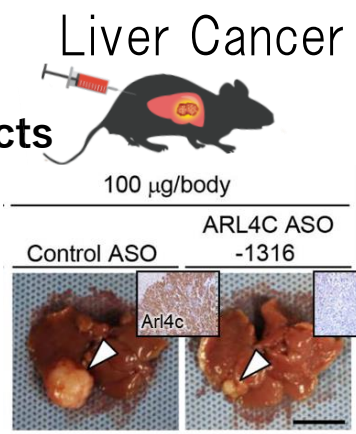
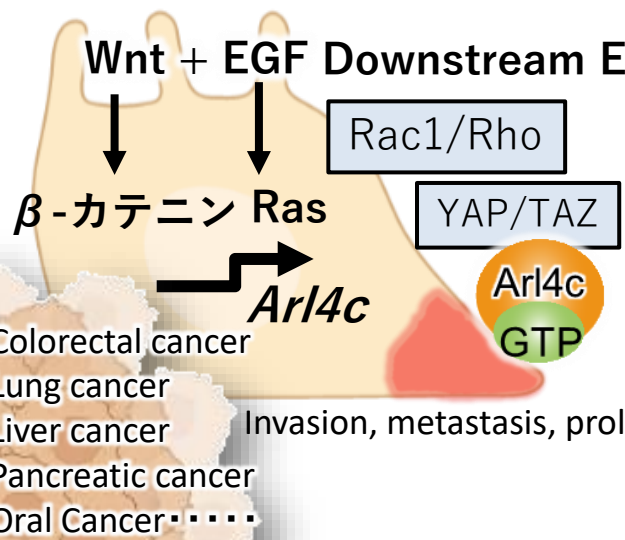
Novel Nucleic Acid Drug Candidates : Arl4c

Arl4c : Low molecular weight G protein belonging to the Arf family
Expressed by the co-operative action of Wnt and EGF signaling

Arl4c activates the Rac and Rho low molecular weight signaling pathways and promotes cancer cell proliferation and invasion. Overexpression is frequently observed in lung, colon, liver, and pancreatic cancers and correlates with poor prognosis.



Arl4c ASO inhibits tumorigenesis of lung, colon, and liver cancers in mouse models. Inhibits metastasis of pancreatic cancer.

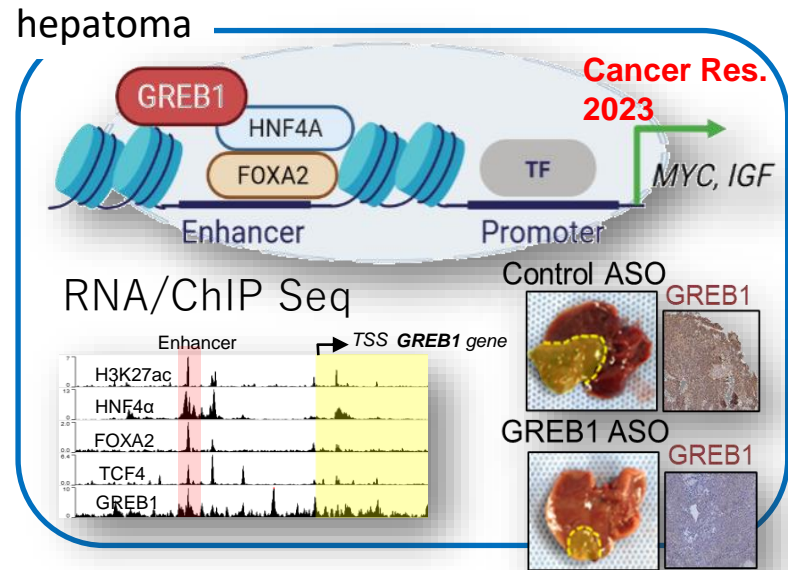
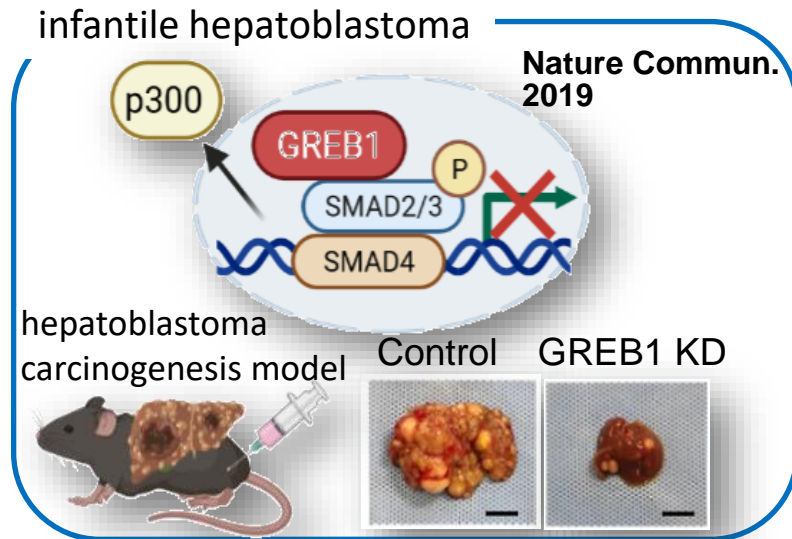


Patent application: "Antisense oligonucleotides targeting ARL4C and nucleic acid medicine using said antisense oligonucleotides. antisense oligonucleotide targeting ARL4C, and nucleic acid medicine using said antisense oligonucleotide. PCT/JP2019/034746

Novel Nucleic Acid Drug Candidates GREB1

GREB1 is a target gene (protein) of hormone receptors and is itself an activator of hormone receptors. GREB1 is highly expressed in breast and prostate cancers, which are hormone-dependent tumors, and promotes tumor growth. GREB1 is expressed in hormone-independent tumors such as hepatoblastoma, hepatocellular carcinoma, malignant melanoma, and neuroblastoma.

In hepatoblastoma, hepatocellular carcinoma, malignant melanoma, and neuroblastoma, GREB1 was expressed by cancer cell-specific transcription factors; GREB1 expression correlated with the aggressiveness of the hormone-independent tumors described above.



Patent pending: PCT/JP2020/020274 (2020. 5. 22)

Proposal: Licencing, Collaboration

Antibody drug : **CKAP4**

Now, **humanized antibody is available.**

Would you like to investigate synergistic effects with your anti-cancer drugs and antibodies?

Antisense drug : **Arl4c、 GREB1**

Antisense to **liver for easy delivery**

Research using the latest nucleic acids from the Obika's Lab is underway.