

Supplementary Information

A glucose carbonate apatite complex exhibits *in vitro* and *in vivo* antitumour effects

Hirofumi Yamamoto^{1*}, Xin Wu^{1, 2}, Hiroyuki Nakanishi³, Yuki Yamamoto³, Mamoru Uemura¹, Taishi Hata¹, Junichi Nishimura¹, Ichiro Takemasa¹, Tsunekazu Mizushima¹, Jun-Ichi Sasaki⁴, Satoshi Imazato⁴, Nariaki Matsuura⁵, Yuichiro Doki¹, and Masaki Mori¹

Supplementary Figure S1. *In vivo* tumour uptake of glucose facilitated by CA-[Glc].

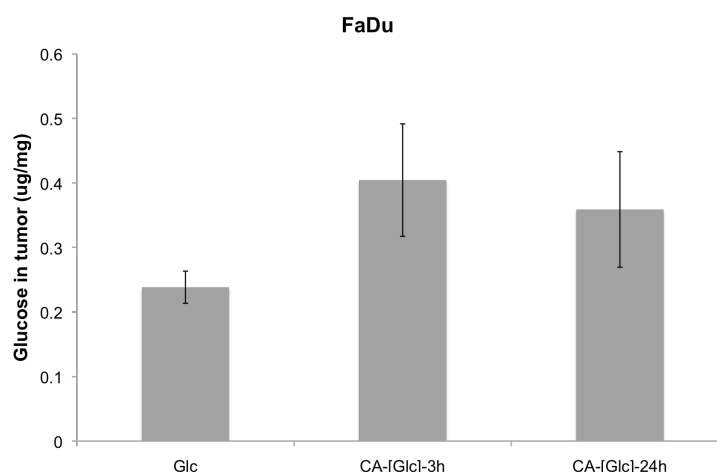
CA-[Glc] complex containing 100 mg glucose and Glc (100mg) were i.v. injected in the mouse therapeutic model of pre-established head and neck FaDu tumours. The glucose in tumour treated with CA-[Glc] was significantly higher at 3 and 24 h than that treated with Glc (n = 4, $P = 0.0265$ for both).

Supplementary Table S1. Test items and schedule of non-human primate toxicity study.

Supplementary Table S2. Items and methods of examination on cumulative urine samples.

Supplementary Table S3. Items and methods of examination on blood samples.

Supplementary Figure S1



Supplementary Table S1

Item	Schedule or frequency	
Observation of general condition	Week -1:	Once a day (between 08:00 ~12:30)
	Each administration day:	Before and 0, 30 min, 1, 2, 3, and 5 hours after administration
	Recovery period:	Once a day (between 08:00 ~12:30)
Measurement of body weight	Week -1:	Once a day (between 08:00 ~12:30)
	Each administration day:	Once a day (between 08:00 ~12:30)
Measurement of food consumption	Every day in Week -1, and during the administration period and recovery period	
Urinalysis	Day before administration :	Once a day (between 12:00 ~15:00)
	Each administration day:	Once a day (0~3 hours after administration)
Blood chemistry examination	Day before administration:	Once a day (between 08:00 ~12:30)
	Each administration day:	Once a day (before administration)

Supplementary Table S2

Examination on cumulative urine sample	
<u>Item</u>	<u>Method of measurement</u>
Urine volume	Volumetry using a measuring cylinder (Unit: mL)
Sodium } Potassium } Chloride }	Ion-selective electrode method ^{a)} (Unit: mmol/3h)
Instruments used a): Clinical Laboratory System TBA-120FR (Toshiba Medical Systems Corporation)	

Supplementary Table S3

<u>Item</u>	<u>Method</u>	<u>Unit</u>
ALP	Bessey-Lowry method ^{a)}	IU/L
Total cholesterol (T-CHO)	CEH-COD-POD method ^{a)}	mg/dL
Triglyceride (TG)	LPL-GK-GPO-POD method ^{a)}	mg/dL
Phospholipid (PL)	PLD-ChOD-POD method ^{a)}	mg/dL
Total bilirubin (T-BIL)	Bilirubin oxidase method ^{a)}	mg/dL
Glucose (GLU)	Glucose dehydrogenase method ^{a)}	mg/dL
Blood urea nitrogen (BUN)	Urease-LEDH method ^{a)}	mg/dL
Creatinine (CRNN)	Creatininase-creatinase-sarcosine oxidase-POD method ^{a)}	mg/dL
Sodium (Na)	Ion selective electrode method ^{a)}	mmol/L
Potassium (K)	Ion selective electrode method ^{a)}	mmol/L
Chloride (Cl)	Ion selective electrode method ^{a)}	mmol/L
Calcium (Ca)	OCPC method ^{a)}	mg/dL
Total protein (TP)	Biuret method ^{a)}	g/dL
Albumin (ALB)	BCG method ^{a)}	g/dL
A/G ratio (A/G)	Calculated from total protein and albumin	
AST	UV-rate method ^{a)}	IU/L
ALT	UV-rate method ^{a)}	IU/L
CPK	UV-rate method ^{a)}	IU/L
LDH	UV-rate method ^{a)}	IU/L
Equipment used a): Clinical Laboratory System TBA-120FR (Toshiba Medical Systems Corporation)		