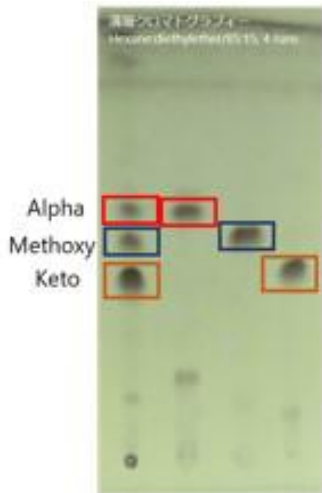


## From Laboratory of Urology

Cationized liposomal keto-mycolic acids isolated from Mycobacterium bovis bacillus Calmette-Guérin induce antitumor immunity in a syngeneic murine bladder cancer model.

### Purification of MA and Preparation of Liposome



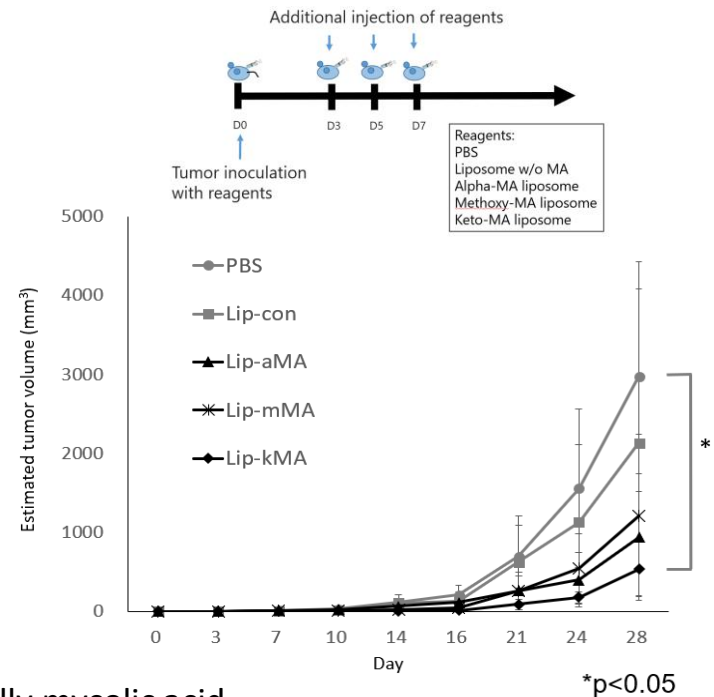
	Diameter (nm)	Polydispersity index (Pdl)	Z potential (mV)
w/o MA	106	0.144	18.4
Alpha-MA	120.5	0.153	2.96
Methoxy-MA	118.5	0.214	8.01
Keto-MA	154.1	0.256	10.4

- Liposome were prepared by mixing MA with DOPC, cholesterol, and dendron-bearing lipid D22
- Sonication, Freeze-thaw, Mini-extruder
- MA Liposome :1 Diameter <200nm  
2 Positive Z potential (cationic)  
3 Water-soluble

### 【Key Message】

- Cell wall components of BCG are highly hydrophobic, especially mycolic acid.
- We developed liposome, which is water soluble and can be internalized into various cells.
- Keto mycolic acid liposome showed strongest antitumor effect among three subclasses.
- Mycolic acid might serve as more-active and less-toxic alternatives to live BCG in immunotherapy.

### Anti-tumor effects in vivo-MA liposome



References: Yoshino T et al. PLoS One. 2019 Jan 4;14(1):e0209196

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