Animal Experiments

Construction of hyperuricemia animal models.

1) Divide 10 male 5-week-aged balb/c mice into two groups randomly: Group 1 (n=5) and Group 2 (n=5). Set one week's time without special handling to let them adapt to the new environment.

2) Feed Group 2 with special feed containing 0.1% adenine since week 2 while feeding Group 1 with normal feed. All the feeding condition is the same expect for feed.

3) Take the blood of all the mice from caudal vein after 3 weeks' feeding, isolate the serum and demonstrate the concentration of blood uric acid with ELISA.

Colonization ability test.

1) Divide 10 male 5-week-aged balb/c mice into two groups randomly: Group A (n=5) and Group B (n=5). Set one week's time without special handling to let them adapt to the new environment. On the first day of week 2, 200μl engineered *E. coli* Nissle 1917 (10^{10} cfu) to Group B, i.g. None special treat is applied to Group A.

2) Culture the mice's stools on day 3, 5, 7 and 9 with chloramphenicol which is 3 times of its normal working concentration.

3) Detailed steps of stool culturing: take fresh mice's stool into sterilized EP tube, add 0.2ml sterilized ddH_2O, crush it to make turbid liquid. Add 0.8ml sterilized ddH_2O, mix them fully and let stand until the stools sediment. Take 0.1ml supernatant, add LB with chloramphenicol which is 3 times of its normal working concentration, overnight at 37℃.

in vivo test

1) Divide 25 male 5-week-aged balb/c mice into five groups randomly: Group Control (n=5), Group HUA (n=5), Group Allopurinol (n=5), Group engineered *E. coli* Nissle 1917 (n=5) and Group *E. coli* Nissle 1917 (n=5). Set one week's time without special handling to let them adapt to the new environment.
2) Construct hyperuricemia animal models with all the groups except Group Control.

Apply intragastrical administration as table 1 from week 2, last for 3 weeks.

Group	Feed	i.g.　(per day)
Group Control	Normal	200μL ddH$_2$O
Group HUA	Special	200μL ddH$_2$O
Group Allopurinol		200μL allopurinol solution
Group engineered *E. coli* Nissle 1917		200μL engineered *E. coli* Nissle 1917 (10^{10} cfu) on the first day of every week, 200μL ddH$_2$O on other days.
Group *E. coli* Nissle 1917		200μL *E. coli* Nissle 1917 (10^{10} cfu) on the first day of every week, 200μL ddH$_2$O on other days.

Table 1