Protocol for chemical inducible expression of MBP & sample preparation

Materials:

- HgCl2 store solution with the concentration of 10^−3M
- Overnight bacterial culture or bacterial colonies;
- fuming nitric acid
- IPTG

1. Add 1ml of the overnight bacterial culture or pick a colony to 100ml of LB antibiotic medium, Incubate at 37 degree in a shaker till the OD600 value reaches 0.6.

2. Add 1ml IPTG to the 100ml bacterial to induce the expression of Mental Binding Peptide (MBP) or Lpp−Ompa−MBP or Dsba−MBP.

3. Incubate the culture at 30 degree for 0.5 hour.

4 Supply HgCl2 to the culture to different concentrations of 10^−6M, 10^−7M, 10^−8M and control.

5. Incubate the culture at 30 degree for 40 hours.

6 Harvest cells by spinning at 5000rpm for 5 min. Discard the supernatant, Wash with 6ml of ddH2O for two times.

7 Dehydration the bacteria with freeze dryer, followed by measurement of the weight of cell pellet.

8 Resuspend the pelleted cells in 8ml fuming nitric acid, followed by microwave digestion. Resuspend sample to 25mL. Then sample preparation

is completed.