

### 6.15.10

#### Metals planning meeting

Parts:

efflux, gold TF, ars repressor, stationary phase promoter, collection, inducible promoter.

1. Get each part in a biobrick plasmid RFC10 (no promoter at this point). Bold are already biobricks in registry.
  - a. ArsB
  - b. ArsR
  - c. Gold efflux
  - d. Gold TF
  - e. **Vesicle biobrick**
  - f. **ArsR/vesicle biobrick**
  - g. Ars Promoter
  - h. **Stationary phase promoter**
  - i. **LamB**
  - j. PAL
  - k. **AIDA**
  - l. ArsMT
  - m. GoldMT
  - n. Promoters J23100 and J23119
2. PCR tricks to make metallothioneine fused to membrane protein.
3. Put MT/membrane protein into biobrick format.
4. Place efflux system under regular strength constitutive promoter.
5. Combine parts with promoters
  - a. try our arsR promoter with gas vesicle part.
  - b. Stationary phase promoter with gas vesicles part.
  - c. MT/MP under J23119
  - d. Efflux under J23100
  - e. ArsR under J23100
6. Combine systems into 2-3 compatible plasmids
7. Characterize system
  - a. Effects at different concentrations of metal
  - b. Pond water
  - c. Protein gels to see how much metallothioneine is on the cell surface and check size of protein.
8. Modeling
  - a. Floating of cell
  - b. Amount of metal binding to surface relative to entering the cell
9. Steal francis' stuff
10. Cure cancer, maybe AIDS

11. Done! iGEM WIN!