

## Phage Growth Kinetics

1. Prepare three overnight bacterial cultures from 3 separate bacterial colonies of the same strain
2. Next day, check OD<sub>600</sub> value and adjust it according to required CFU/mL. For example, strain A has  $1 \times 10^9$  CFU/mL at OD 0.6. If OD value is high, then dilute it with LB to adjust at required OD. After adjusting OD, add 100 µL of bacterial culture to 900 µL of LB to make final  $1 \times 10^8$  CFU/mL.
3. Prepare phage dilutions (in case of high titer). For example, phage A has  $3.4 \times 10^{12}$  PFU/mL, make dilutions to a final titer of  $1 \times 10^{10}$ ,  $1 \times 10^9$ , and  $1 \times 10^8$  PFU/mL.
4. For MOI 1, add 100µL of bacteria (from  $1 \times 10^8$  CFU/mL culture) and 100µL of phage (from  $1 \times 10^8$  PFU/mL dilution).
5. For MOI 10, add 100µL of bacteria (from  $1 \times 10^8$  CFU/mL culture) and 100µL of phage (from  $1 \times 10^9$  PFU/mL dilution).
6. For MOI 100, add 100µL of bacteria (from  $1 \times 10^8$  CFU/mL culture) and 100µL of phage (from  $1 \times 10^{100}$  PFU/mL dilution).
7. For positive control, add 100µL of bacteria (from  $1 \times 10^8$  CFU/mL culture) and 100µL of LB media.
8. For negative control, add 100µL of phage 100µL of LB media.
9. For negative control, add 200µL of LB media.
10. Set up three replicates for each reaction.