

# NISTCHO Upstream Process Flow Chart

Inoculate 100ml shake flask with  $2 - 2.6 \times 10^7$  cells from cell bank



Sample and test culture 30 mins after inoculation and every 24 hours:  
perform O.D.<sub>650</sub>, pH, cell concentration and cell viability assays and test for glucose and lactate levels  
(A 1ml sample of conditioned medium can be save for Glu/Lac determination at a later date)



Scale up to 1L bioreactor when the cell concentration reaches to  $5.5 - 6.5 \times 10^6$  cells/ml  
Usually day 6 or 7 or when cell concentration indicate that the culture is in late log phase



Sample and test the culture in the bioreactor 30 minutes post inoculation and every 24 hours  
by performing O.D., cell concentration, cell viability, glucose and lactate assays and recording  
and pH and DO values  
(A 1ml sample of conditioned medium can be save for Glu/Lac determination at a later date)



Harvest the bioreactor when the cell culture reaches plataeu or early decline phase,  
usually day 7 to 10



Refer to mAb downstream process flow chart for harvest, centrifugation and filtration steps.