1. Cluster Calu-3 expression data

2. Infer regulatory influence network
   a. Predicted influences predict the expression of cluster i ($Y_i$) given the expression (X) of inferred regulatory influences

3. Cross-validation on Calu-3 infection data
   a. Leave out time point
   b. Build predictive model
   c. Evaluate performance (P) of predictive model as correlation of predicted (Y) versus observed (O) expression for all points
   d. Repeat with next time point

4. Cross-prediction on macaque or mouse infection data
   a. Use regulatory influence relationship weights (W) from Calu-3 infection
   b. Apply to expression values (X) from macaque or mouse infection data
   c. Evaluate performance (P) of predictive model

$Y_i = \sum X_A W_A + X_B W_B + X_C W_C$

$P = \text{cor}(Y, O)$