**Step 1: Significant Differential Expression Filtering**

1a. Change p-value must be \( \leq 0.002 \) OR \( \geq 0.998 \)

1b. Differential expression must be \( > 4 \)-fold OR \( > 2 \)-fold change

Is expression above detection threshold? \( \rightarrow \) No

Is the transcript differentially expressed? \( \rightarrow \) No

4-fold: 2,469
2-fold: 7,982

**Step 2: Consistency Filtering**

2a. Each probe set must have passed Step 1 in both experiments

2b. Euclidean distance between replicate profiles is \( \leq 1.4 \)

2c. Pearson’s Correlation between replicate profiles is \( \geq 0.76 \)

Significant in both experiments? \( \rightarrow \) No

4-fold: 1,000
2-fold: 4,439

Consistent expression levels? \( \rightarrow \) No

Consistent profile patterns? \( \rightarrow \) No

4-fold: 395
2-fold: 2,142

**Step 3: Cluster Analysis**

3a. Figure of Merit Analysis

Which clustering algorithm and how many clusters are optimal?

Do the expression profiles cluster consistently in both experiments?

4-fold: 361; 47 clusters
2-fold: 2,025; 140 clusters