Supporting Information for:

Automated Protocol for Large-Scale Modeling of Gene Expression Data

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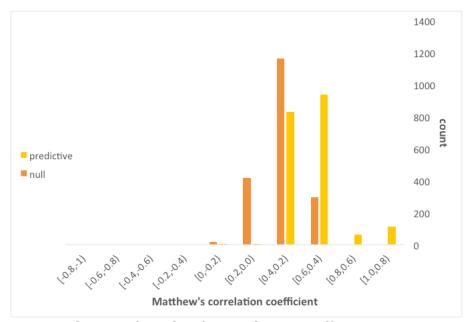


Figure S1: Distribution of Matthew's Correlation Coefficients across training sets for the predictive and null models

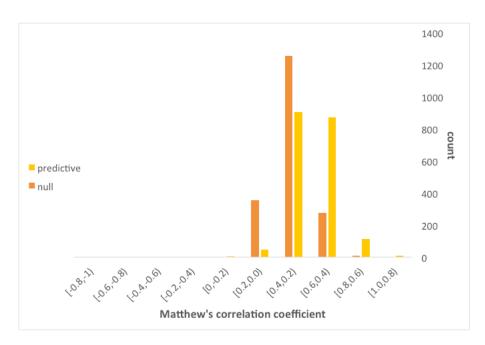


Figure S2: Distribution of Matthew's Correlation Coefficients across test sets for the predictive and null models

| Table S1: Matthew's Correlation Coefficient statistics for training and test sets of both predictive and null models | | | | |
|---|-------------------|----------|--------------|----------|
| | predictive models | | null models | |
| | training set | test set | training set | test set |
| minimum | -0.04 | -0.03 | -0.07 | 0.03 |
| maximum | 1.00 | 1.00 | 0.56 | 0.80 |
| average | 0.45 | 0.41 | 0.29 | 0.29 |
| median | 0.42 | 0.40 | 0.30 | 0.29 |
| standard deviation | 0.15 | 0.12 | 0.11 | 0.10 |

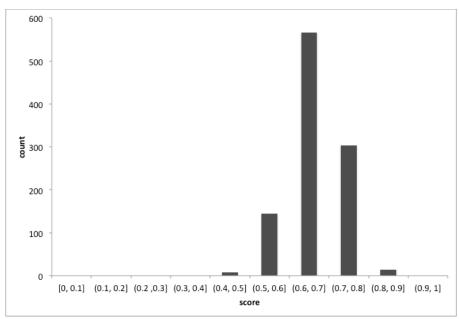


Figure S3: Distribution of *score* for the predictive models when generated based upon two categories only (i.e., affected or not) instead of creating two, two-category models [i.e., (a) up-regulated or not and (b) down-regulated or not]. Compared to the plots shown in Figure 4, we see a slight degradation in score. In particular, the average score here is only 0.67, compared to 0.71 for the scores shown in Figure 4.