NEEDLE for gene discovery in non-model plants

Question
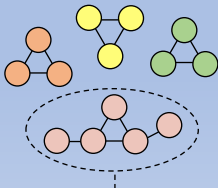
Gene of interest

Input data
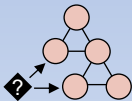
Dynamic transcriptome dataset
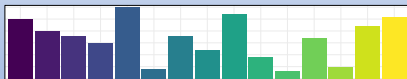
6 – 30 samples across variables (e.g., genotypes, tissues, or time points)

Prediction

Coexpression network modeling

GRN modeling

Validation

Promoter scanning

Transient reporter assay