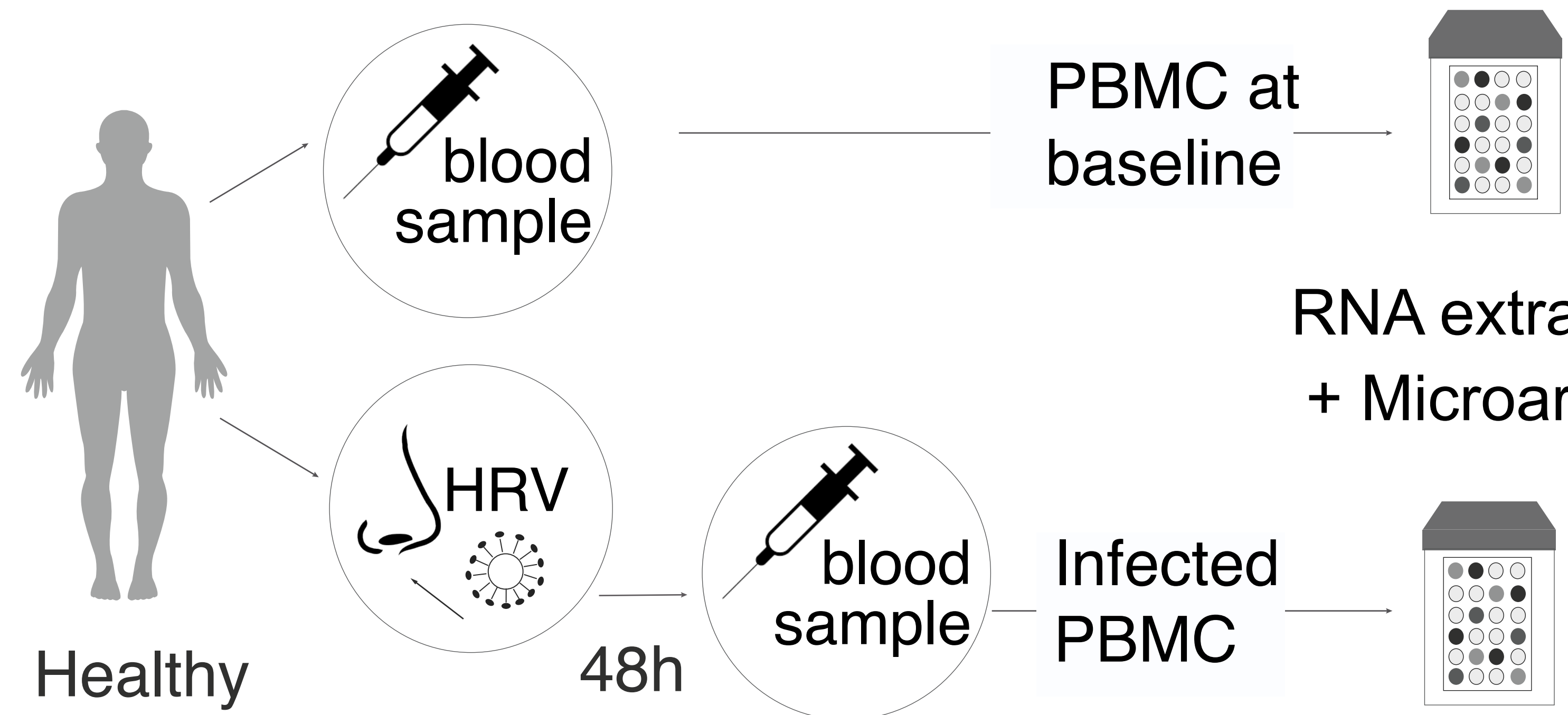


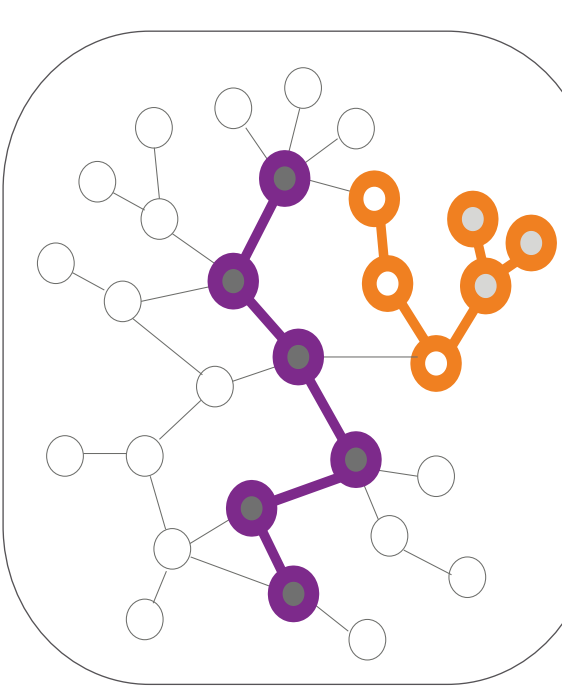
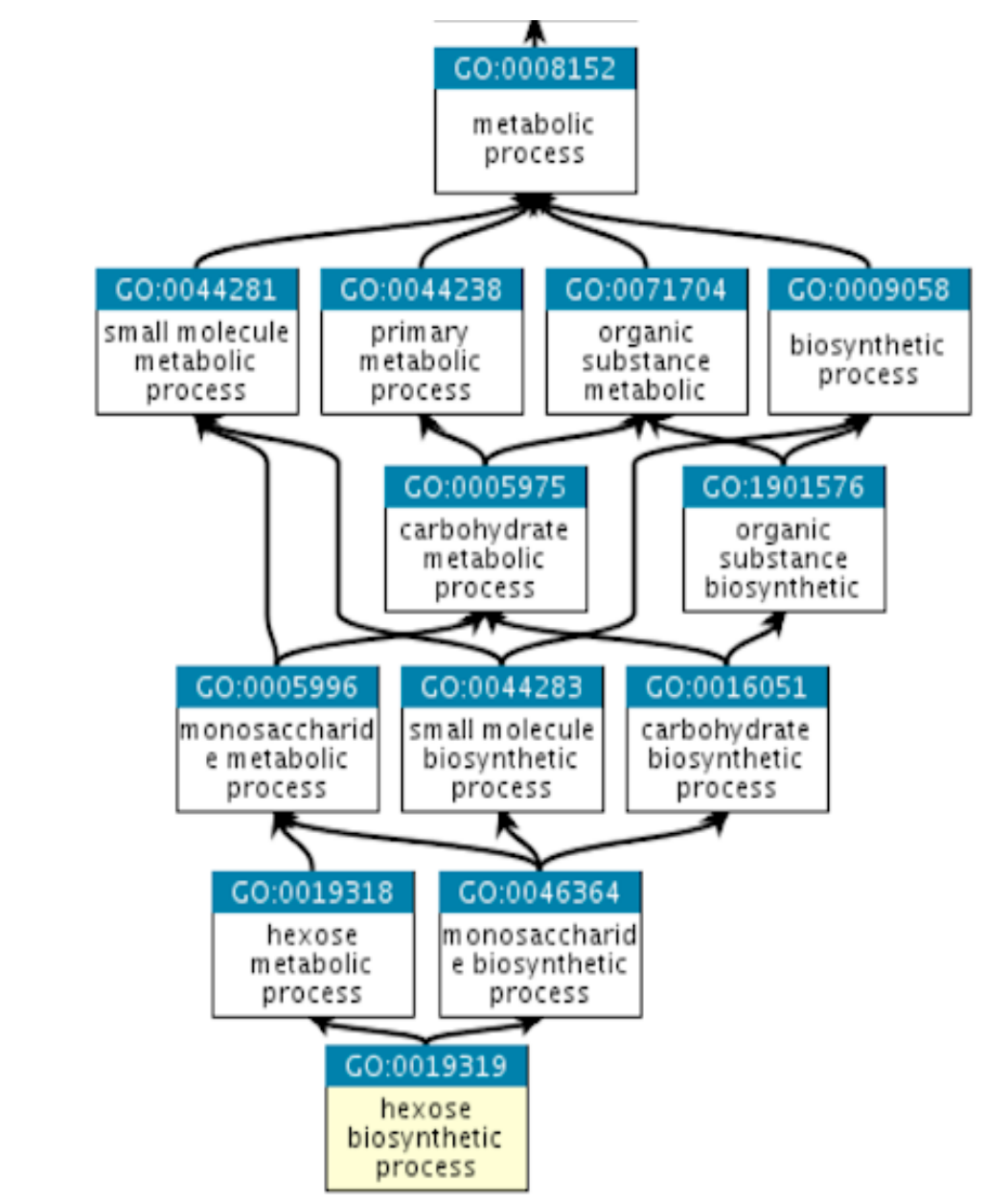
BINOMIALRF PATHWAY-PATHWAY INTERACTION PROOF-OF-CONCEPT

CLINICAL ASSAY



N-of-1 pathways

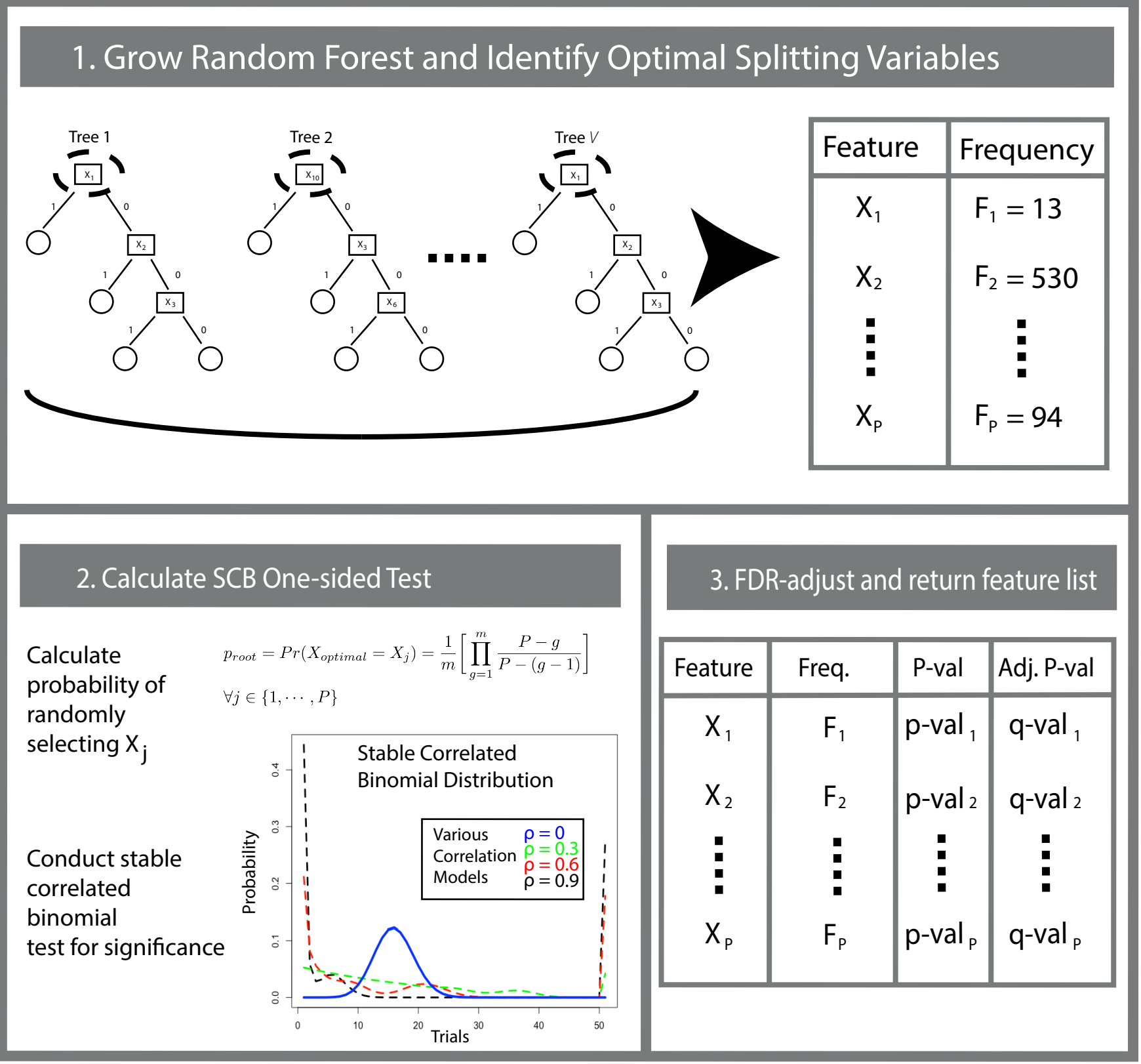
single-subject analysis +
ontology-anchored dimension reduction



Dysregulated
Pathways

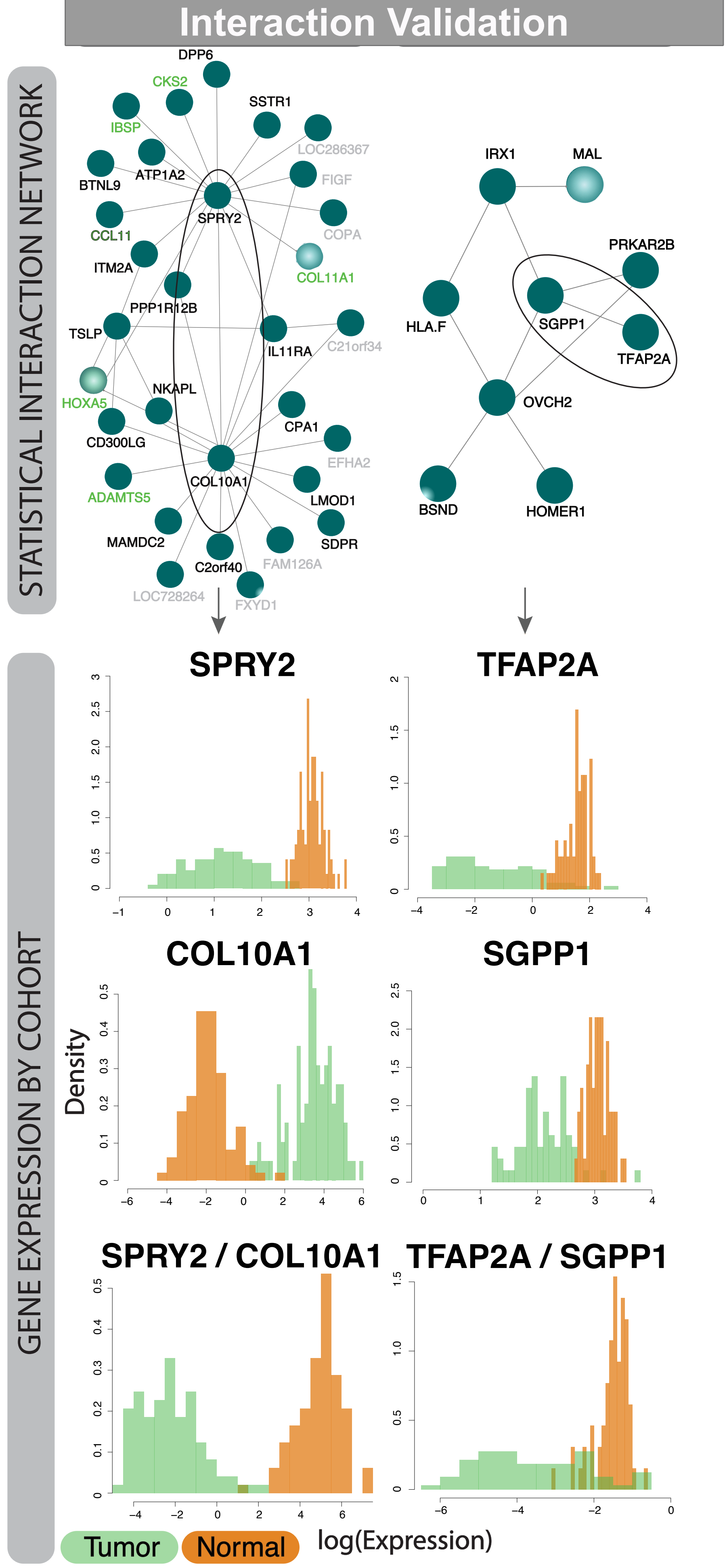
BINOMIALRF CLASSIFIER

train classifier on prioritized
binomialRF pathway interactions

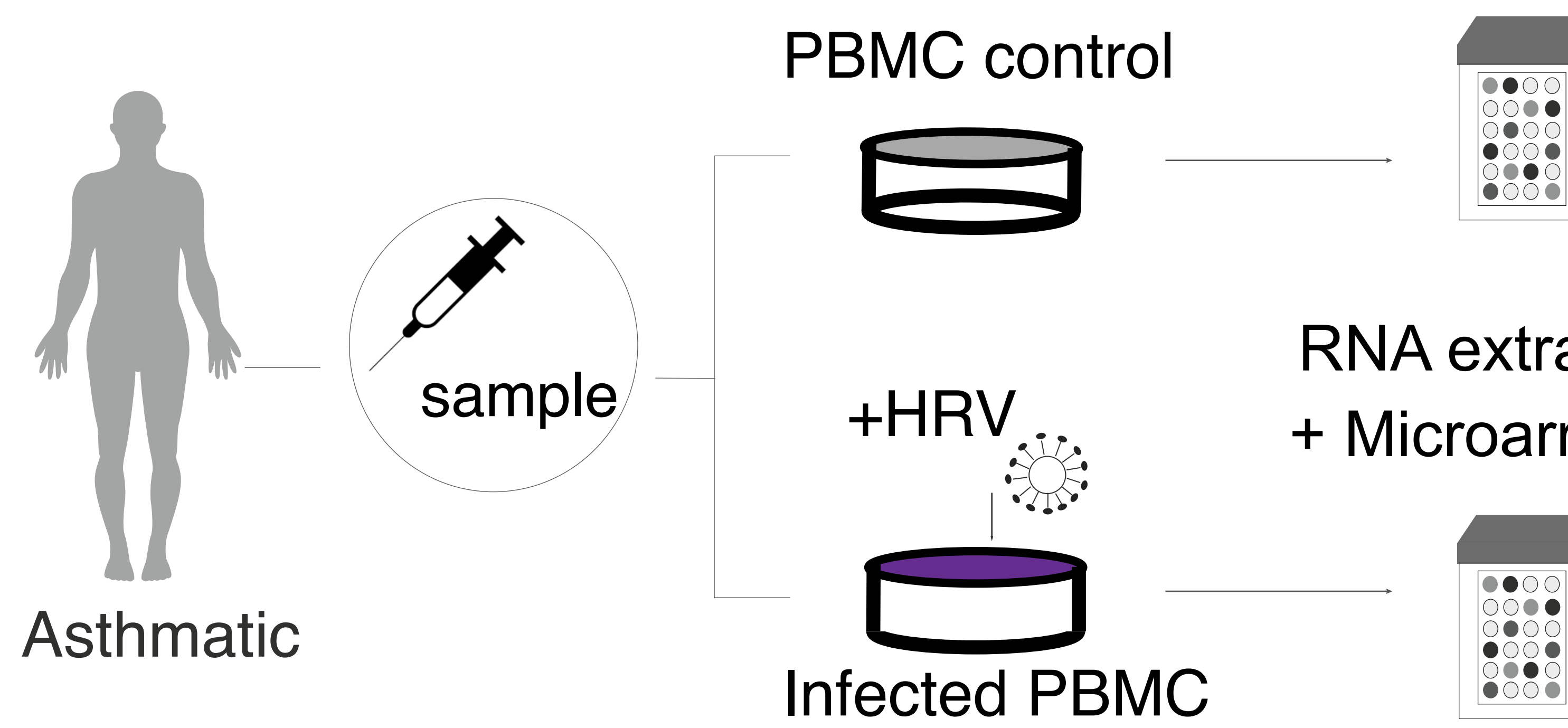


PATHWAY-PATHWAY INTERACTION DETECTION

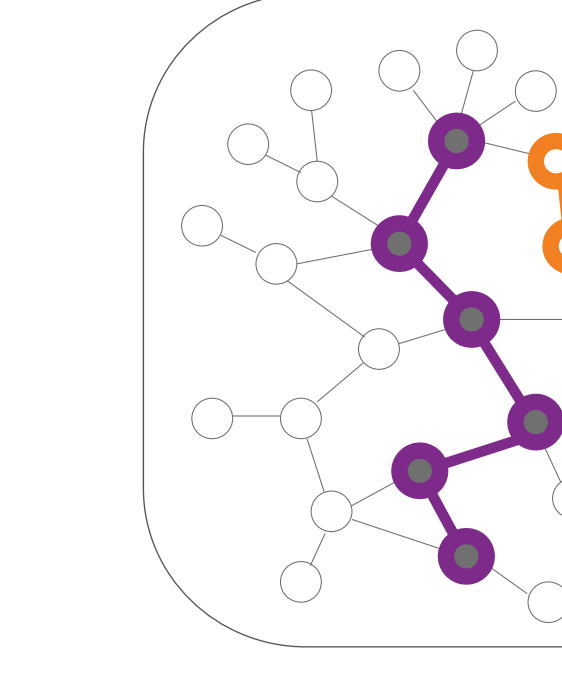
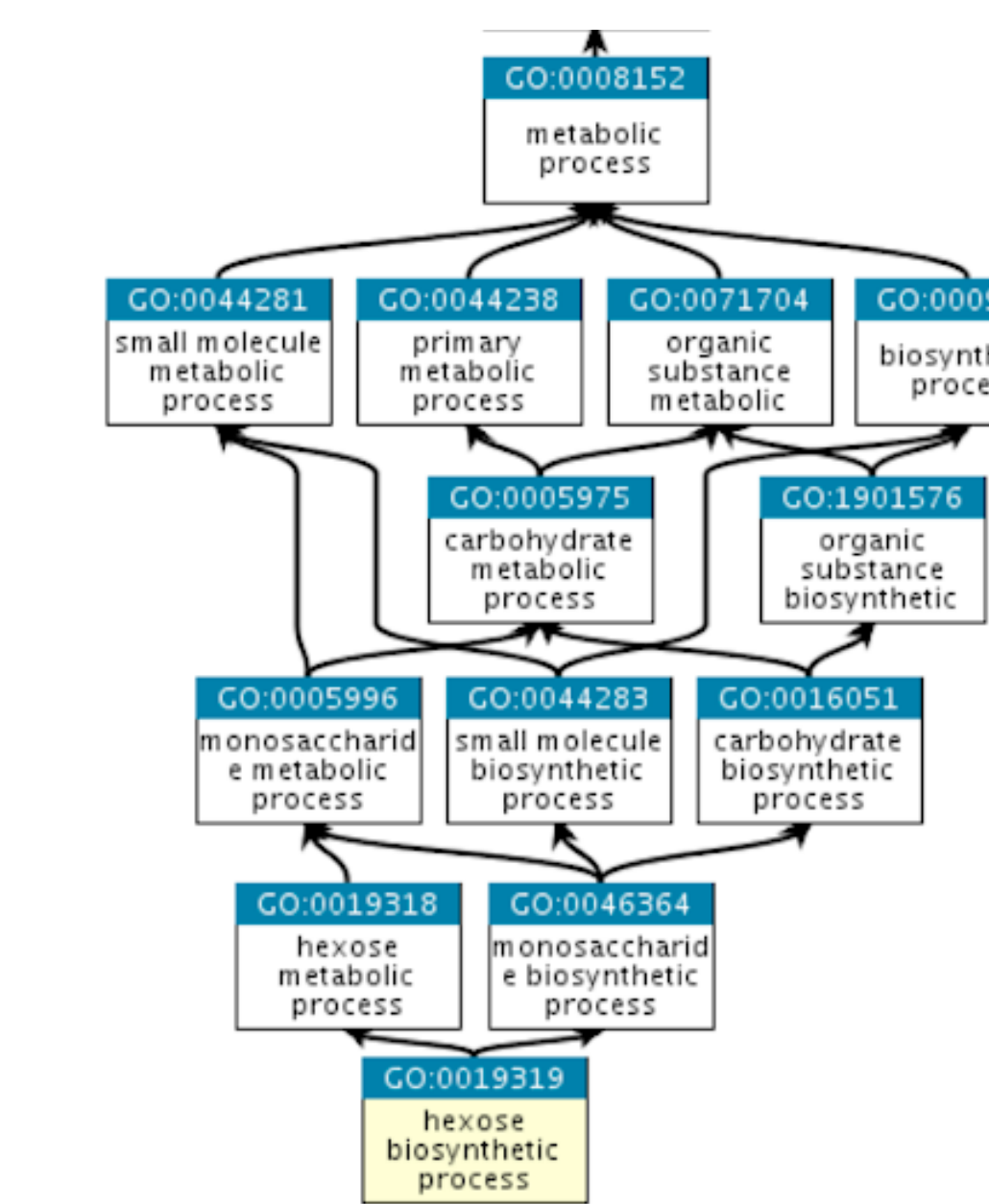
Computationally
Validating pathway
interaction signal



VIROGRAM ASSAY



single-subject analysis +
ontology-anchored dimension reduction

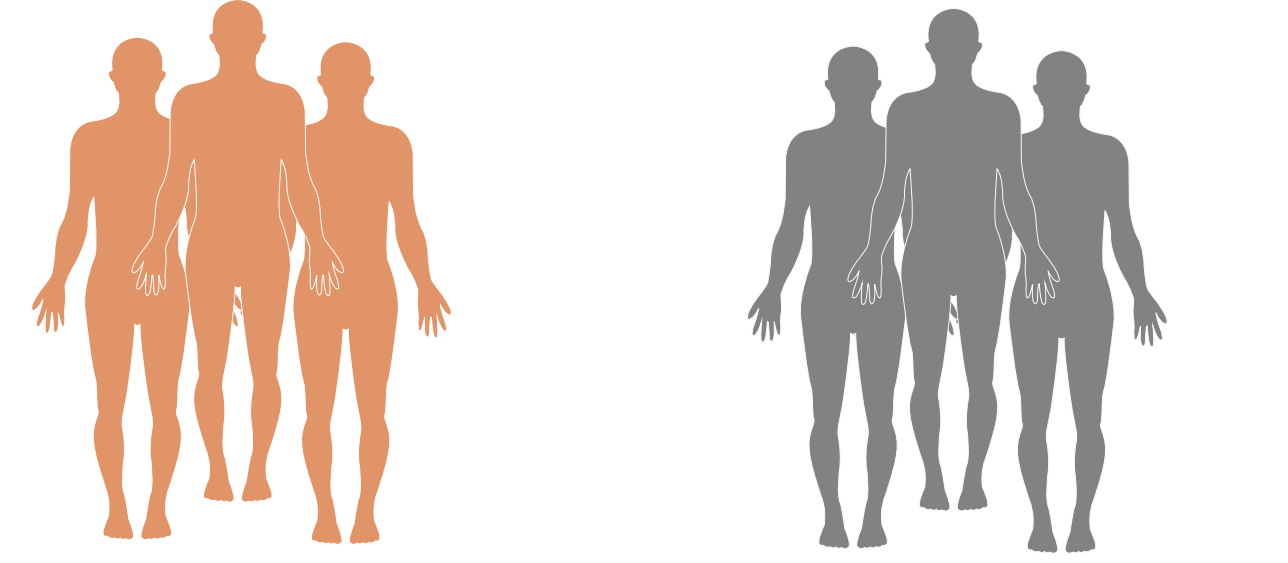


Dysregulated
Pathways

Validate pathway
interaction classifier

Fully Specified
Classifier
by machine
learning

Virogram prediction
vs. clinical prognosis
of Asthma exacerbation



Exacerbated
Non-Exacerbated