# Abstract: Sensitivity analysis Bayesian model

# Introduction

# Materials and Methods

## Data sets

### Synthetic data

### Yeast data

## RVD3 model

### Model structure: Figure 1: RVD3 graphical model

### Inference and hypothesis testing

## Priors for precision parameter

### Improper prior: playing no prior on M is an implicit improper prior.

### Log-normal prior: information prior

### Jeffrey’s prior: non-information prior

# Results

## Sensitivity analysis of priors (Jeffreys prior is better)

### Precision parameter M evaluation: Figure 2/3: M\_rvd29/30

### Distribution of priors/posteriors: Figure 4/5: prior\_posterior\_dilu=1/10

## Results of priors on synthetic data

### Performance with read depth: Figure 6/7: ROC\_rvd29/30

### Statistics evaluation: Sensitivity/specificity/FDR: Table 1

## Results of Jeffreys prior on yeast data

### Performance with read depth: Figure 8: ROC\_yeast

### Statistics evaluation: Sensitivity/specificity/FDR: Table 2

# Discussion