

# Simulation and model analysis

## Non Linear Dynamics

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### LAC Operon Model analysis

Based on Yildirim et al. 2004.

See repository for more information.

#### Setup

```
library(tidyverse)
library(broom)
```

## Scan of appropriate time step size

### Loading simulation results

Loading and structuring data:

```
## Rows: 18
## Columns: 3
## $ Model      <chr> "Corrected", "Corrected", "Corrected", "Corrected", "Corrected", "Corrected"
## $ Timestep   <chr> "0.0001", "0.00025", "0.0005", "0.00075", "0.001", "0.0025", ...
## $ Data       <list> [<tbl_df[60003 x 3]>], [<tbl_df[24003 x 3]>], [<tbl_df[12003~>
## # A tibble: 6 x 3
##       Time Species Concentration
##       <dbl> <chr>     <dbl>
## 1 0         M          2
## 2 0         B          1
## 3 0         A        5000
## 4 0.0001   M          2.00
## 5 0.0001   B          1.00
## 6 0.0001   A        5419.
```

## Visualizing results

