mRNA

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4/23/2021

1 Introductie

mRNA levels in a cell change dynamically in accordance with 3 models.

a. system is at the steady state.
b. number of mRNA is increasing over time.
c. number of mRNA is decreasing over time.

1.1 Goal.

we will attempt to make these models using the deSolve package.

1.2 Theory.

the change of mRNA can be modelled using this biological model based upon. [1].

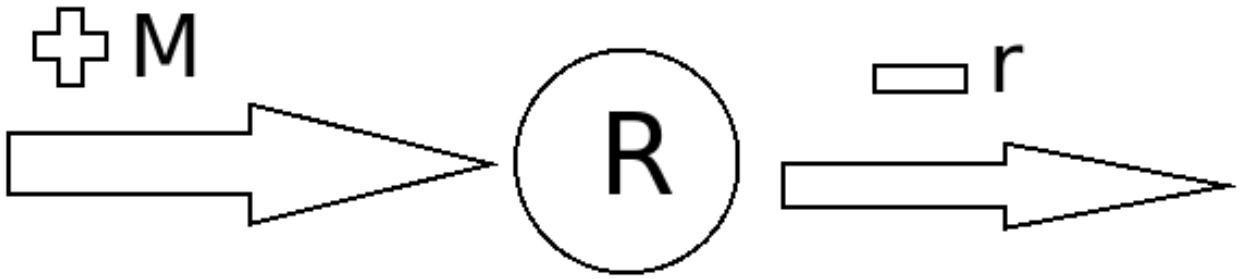

Figure 1: biological model

when we turn this biological model into a mathematical equation we get:

$$dR/dt = -rR + m$$

R is the number of transcripts.

r is the rate of decay of existing transcripts.

m is the number of new transcripts produced per second.

2 Methods.

2.1 The software model.

bla

2.2 Model configuration.

bla

Model	new transcripts	Decay ratio
a.	bla	bla
b.	bla	bla
c.	bla	bla

3 Results.

4 Conclusion and discusion.

5 References.

References

[1] TING CHEN, HONGYU L. HE, GEORGE M. CHURCH *modeling gene expression with differential equations* 4, 1999, https://arep.med.harvard.edu/pdf/Chen99.pdf.