

# PLAS.NET Flux Report

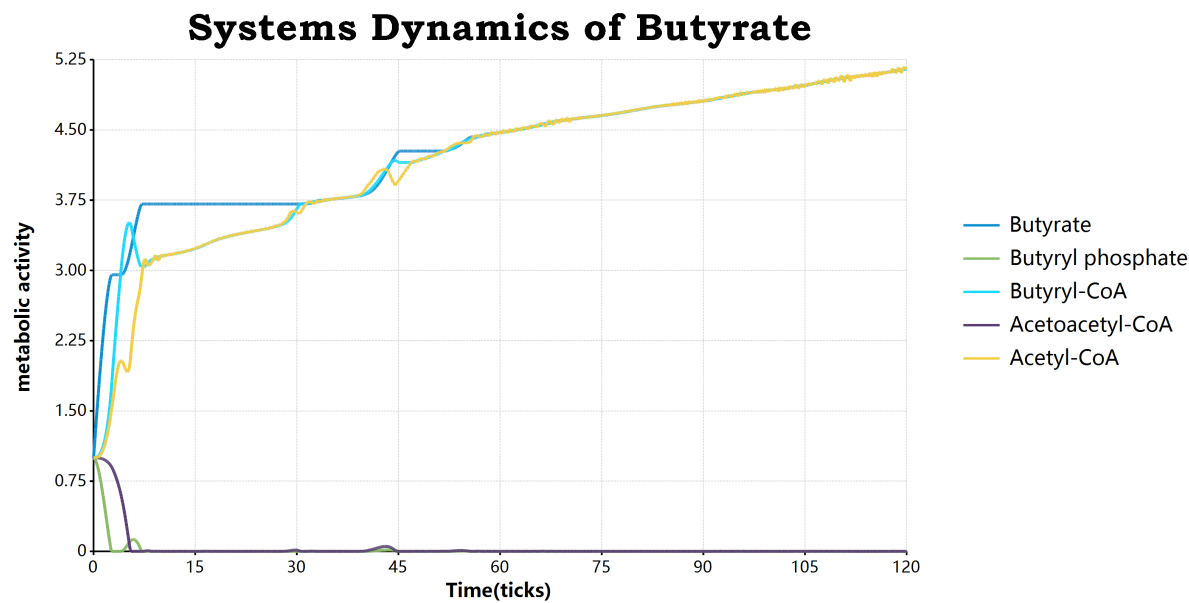
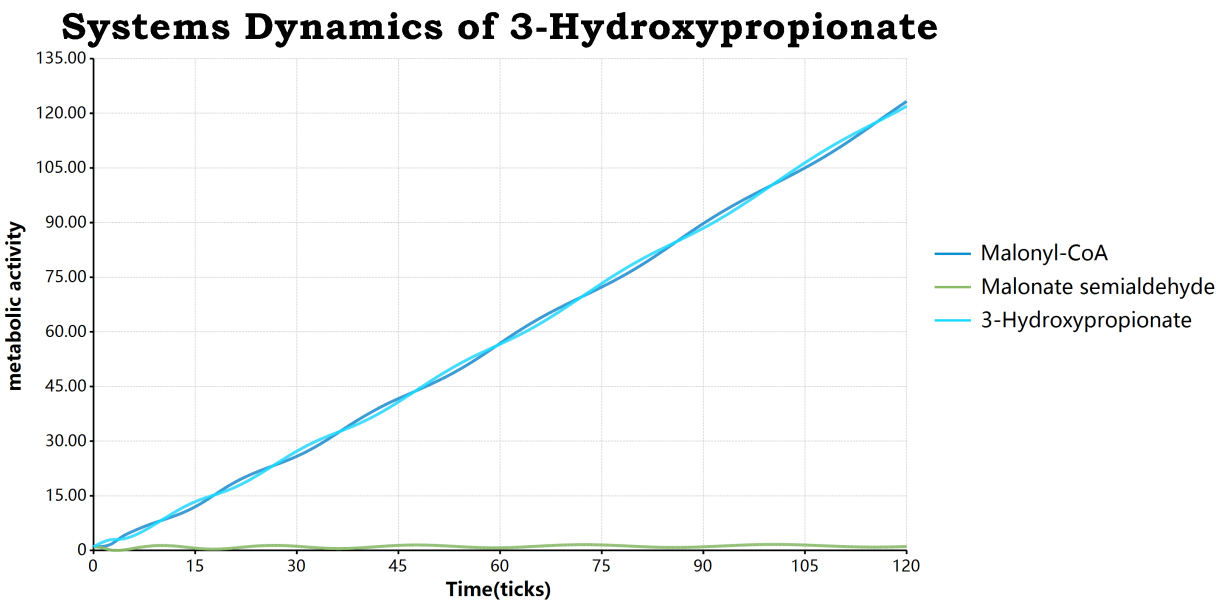
Metabolic flux refers to the amount of a metabolite processed by one or more catalytic steps per unit time, and it is typically normalized by cellular abundance (e.g., gram dry weight) (Stephanopoulos et al., 1998 ).

## Graph View

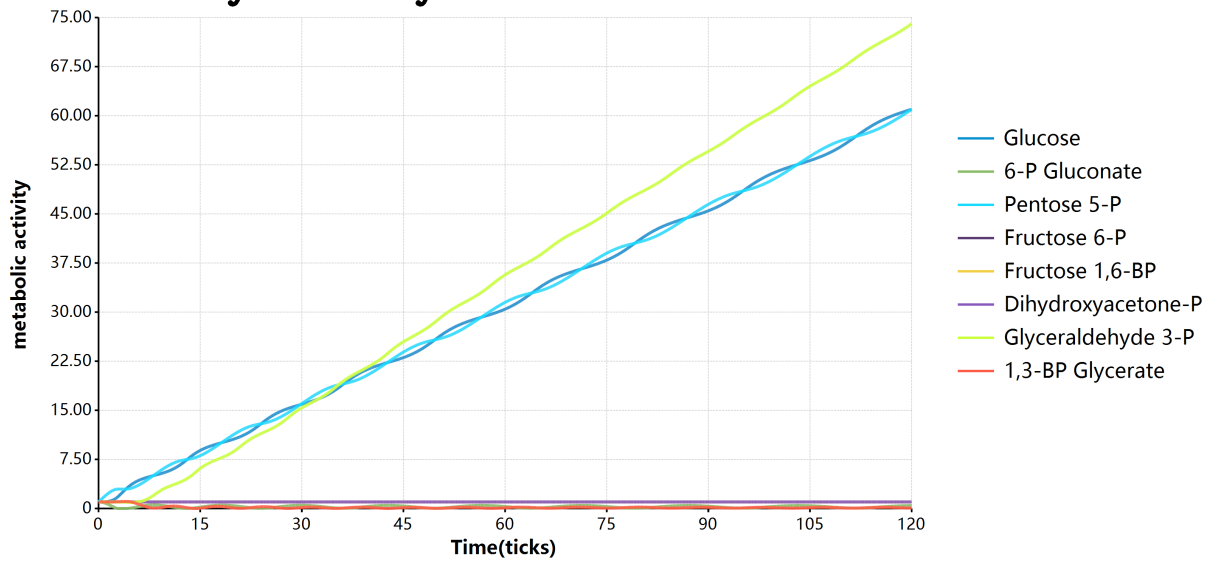
---

# Pathway Dynamics

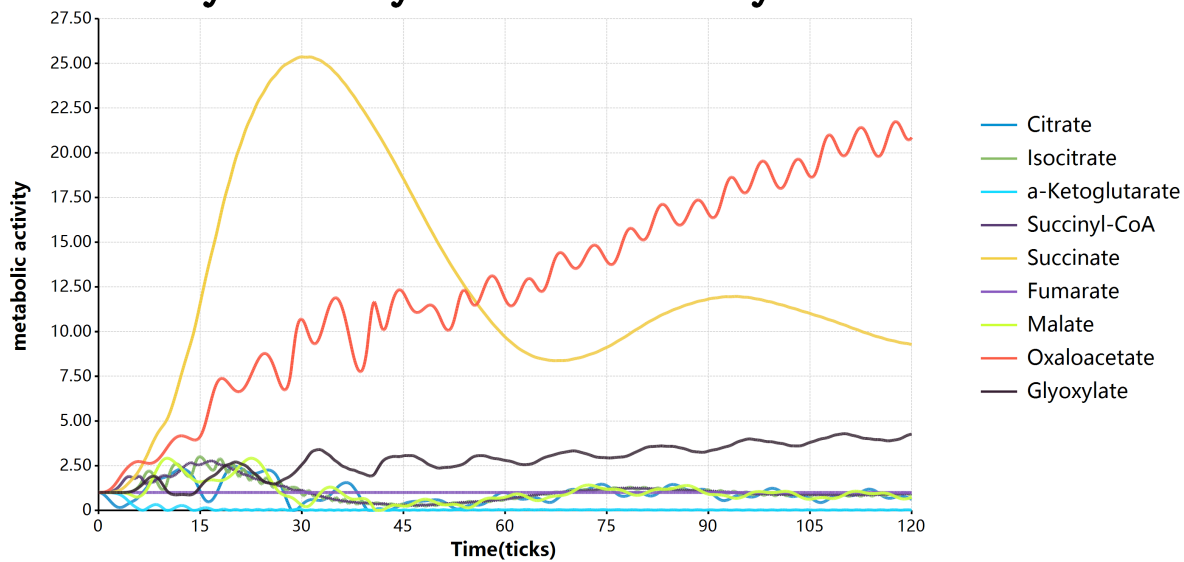
All metabolic changes take place in multiple reactions and follow a particular pathway called the metabolic pathway. The metabolic pathway includes a series of reactions. The metabolite flow, the rate, and direction at which metabolism takes place are called the dynamic state of body constituents.



## Systems Dynamics of Pentose

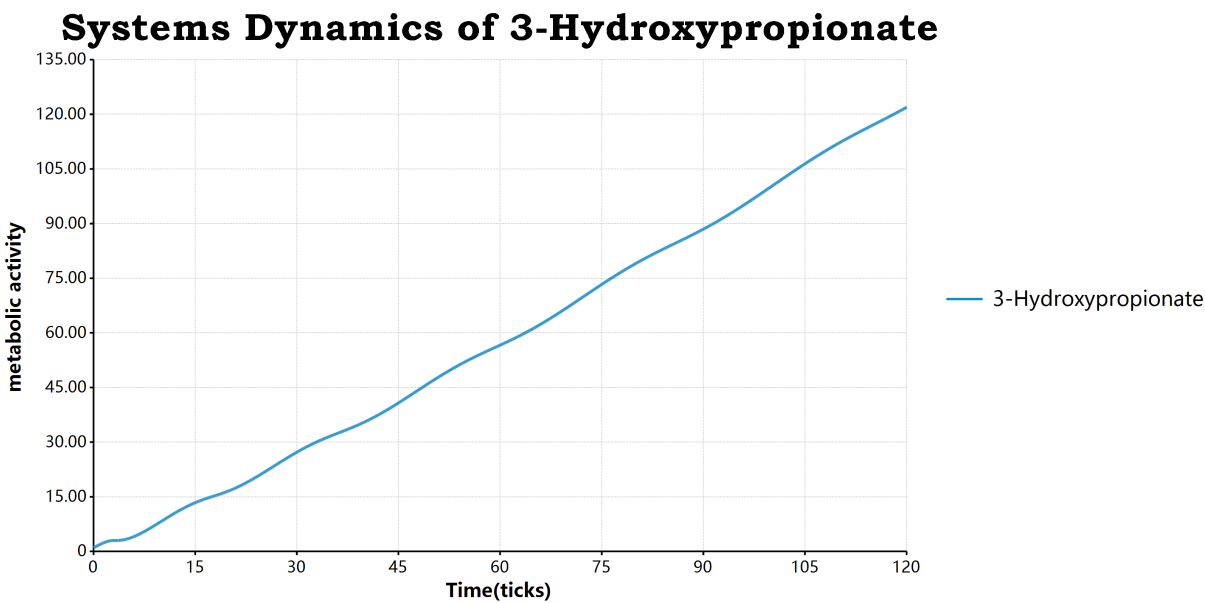
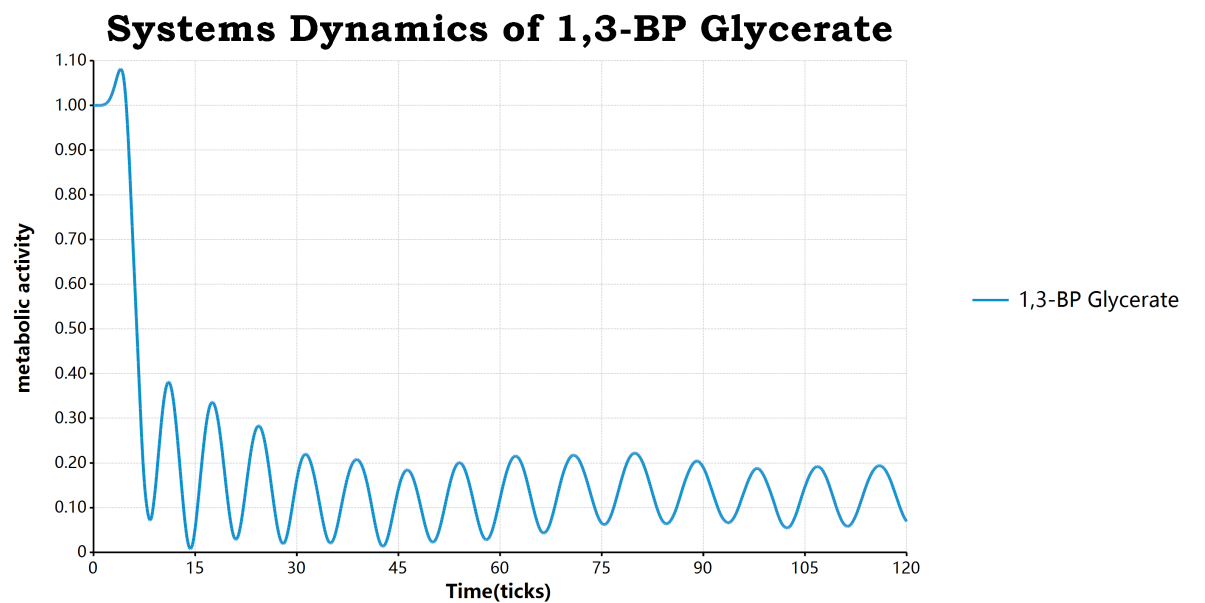


## Systems Dynamics of TCA Cycle

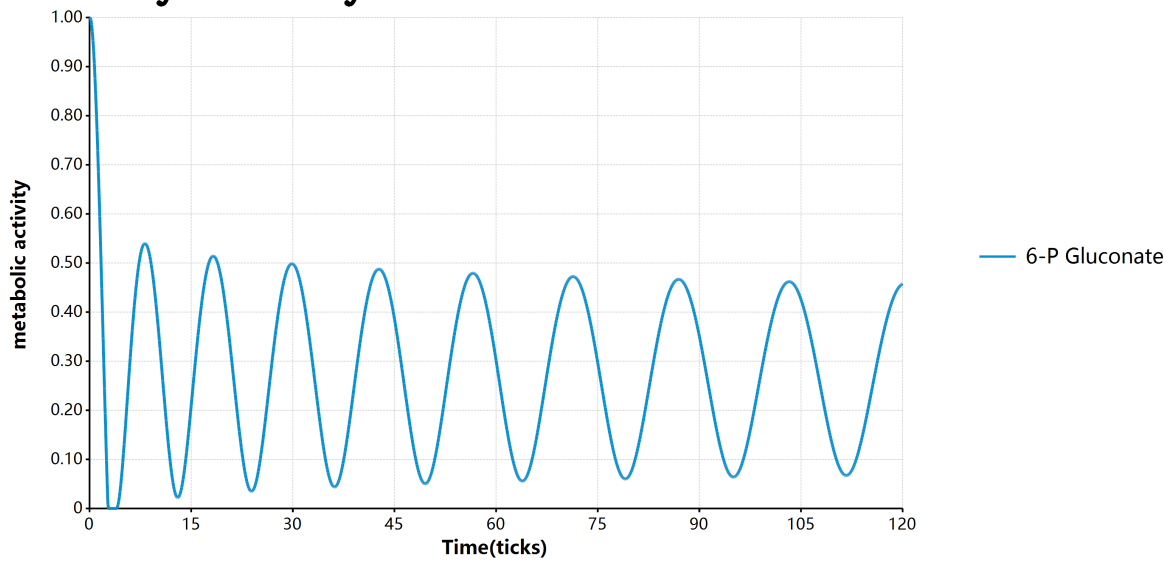


# Fluxomics Dynamics

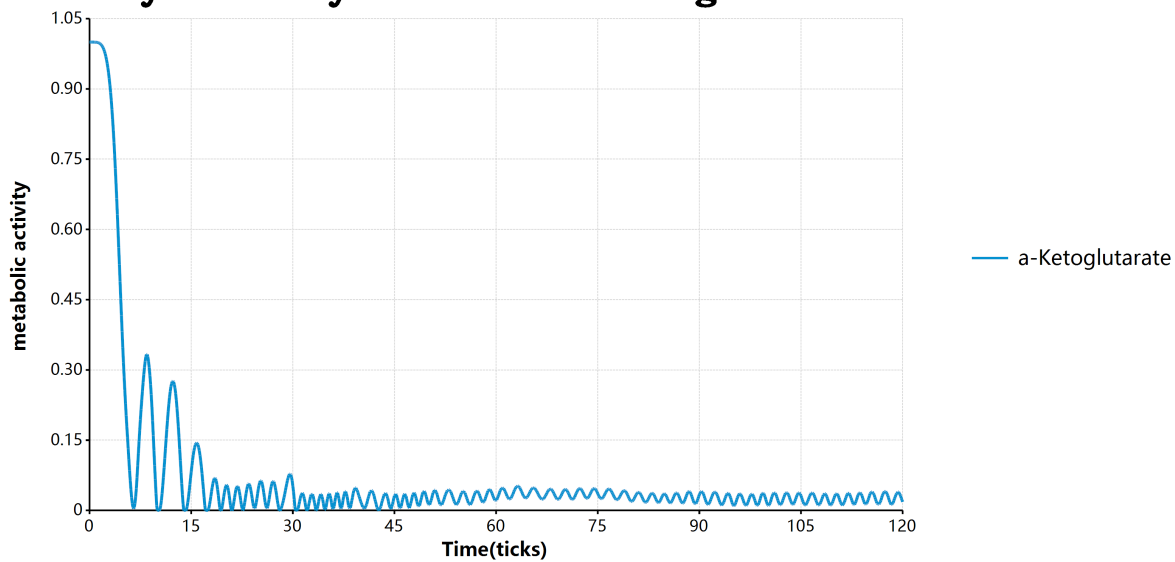
Metabolic flux analysis (MFA) is an increasingly important tool to study metabolism quantitatively. Unlike the concentrations of metabolites, the fluxes, which are the rates at which intracellular metabolites interconvert, are not directly measurable. MFA uses stable isotope labeled tracers to reveal information related to the fluxes. The conceptual idea of MFA is that in tracer experiments the isotope labeling patterns of intracellular metabolites are determined by the fluxes, therefore by measuring the labeling patterns we can infer the fluxes in the network.



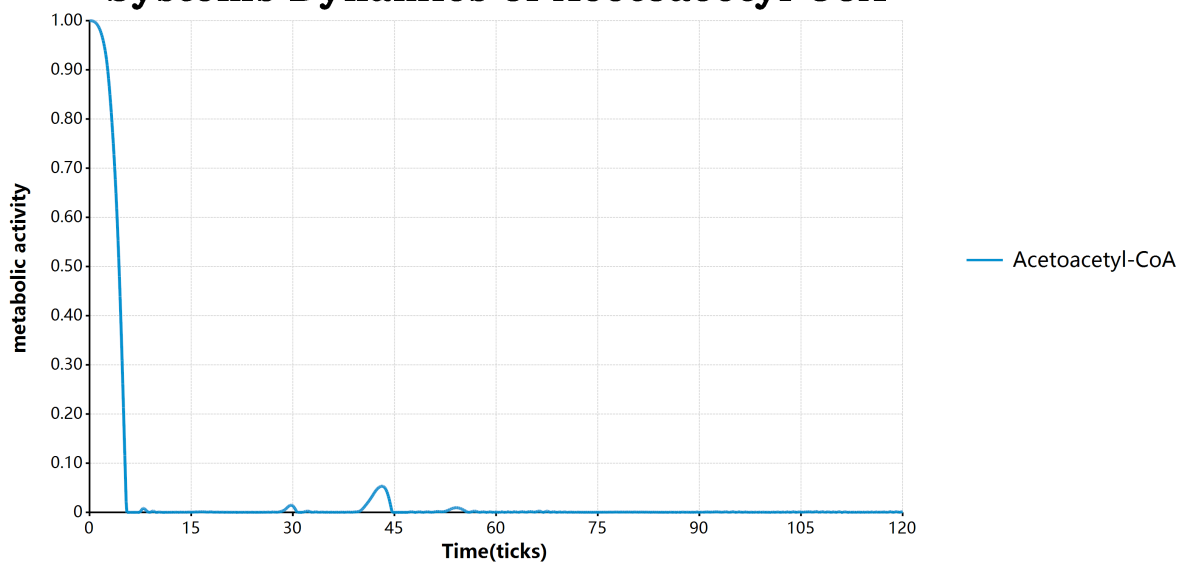
## Systems Dynamics of 6-P Gluconate



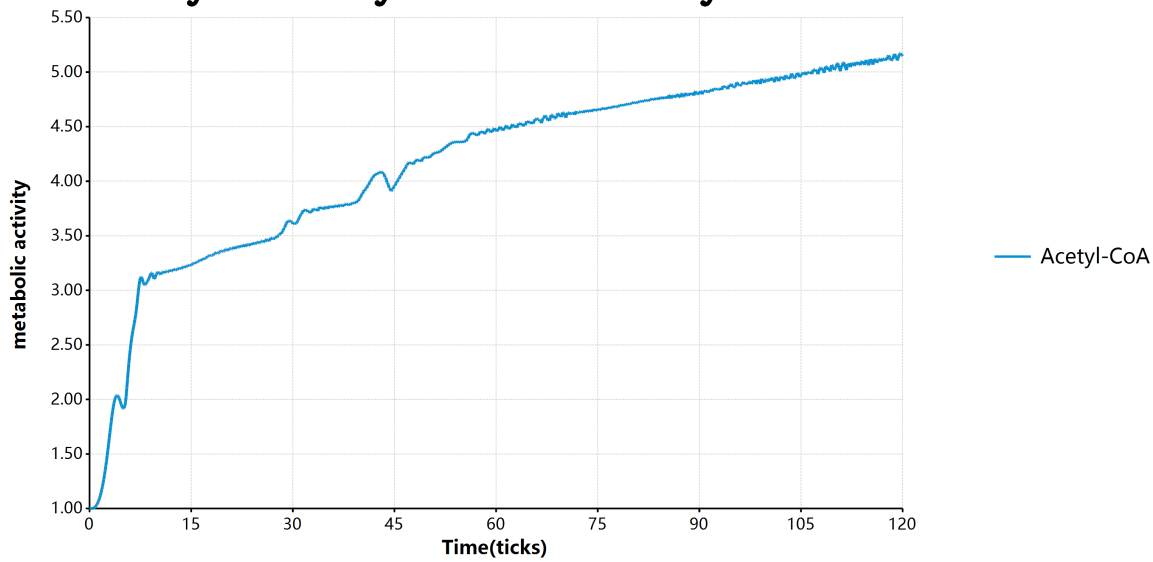
## Systems Dynamics of $\alpha$ -Ketoglutarate



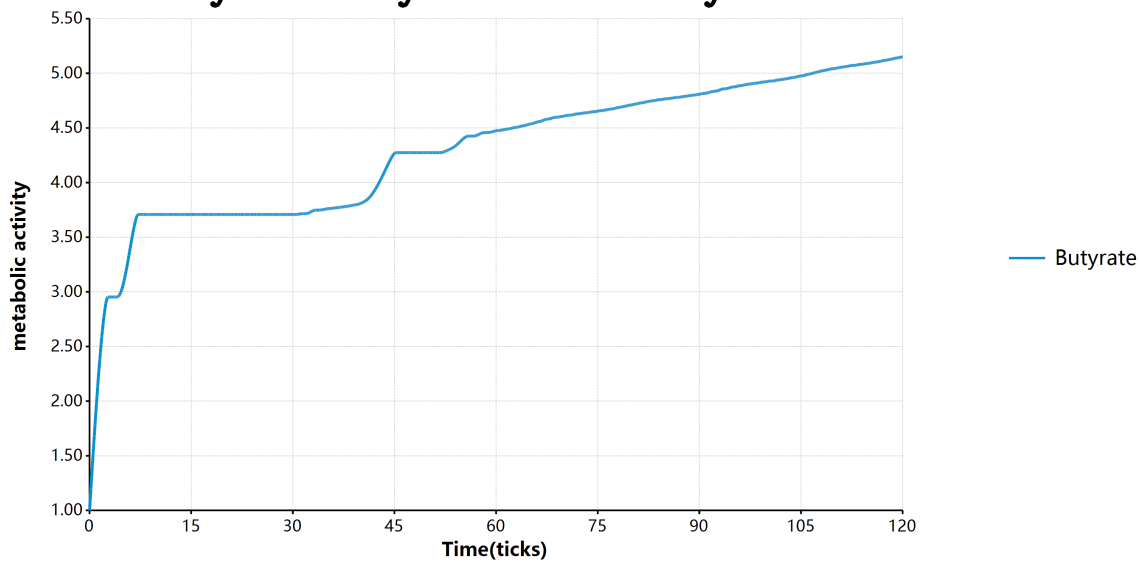
## Systems Dynamics of Acetoacetyl-CoA



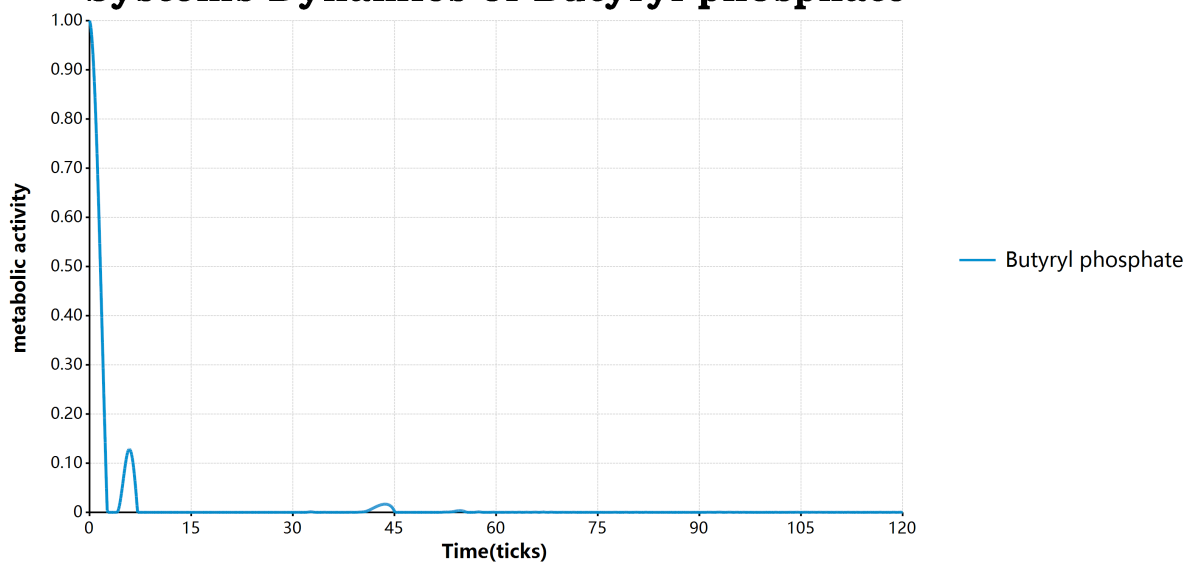
## Systems Dynamics of Acetyl-CoA



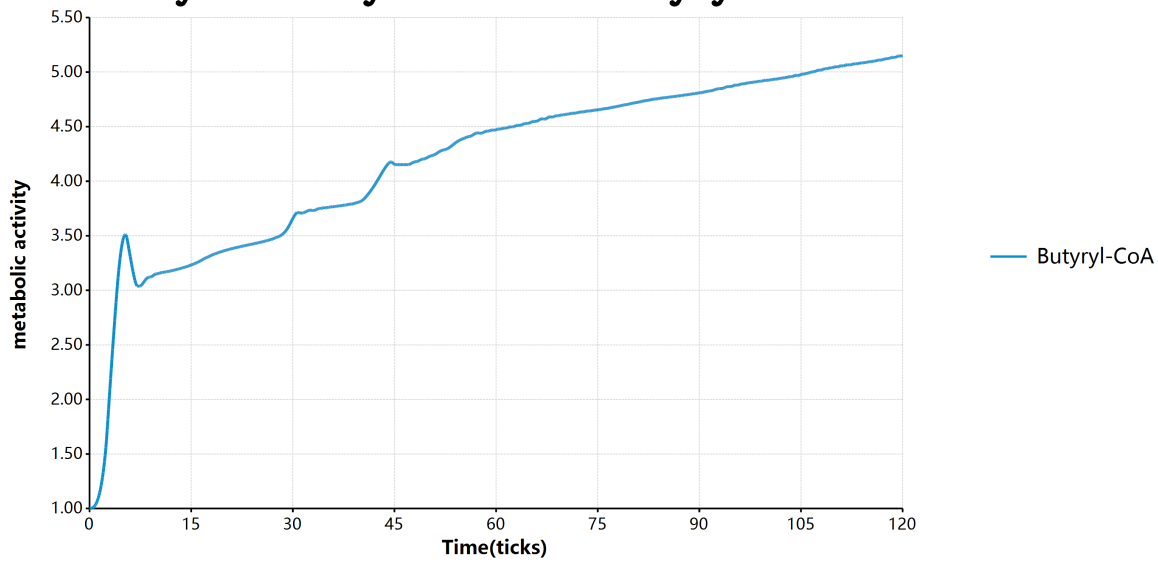
## Systems Dynamics of Butyrate



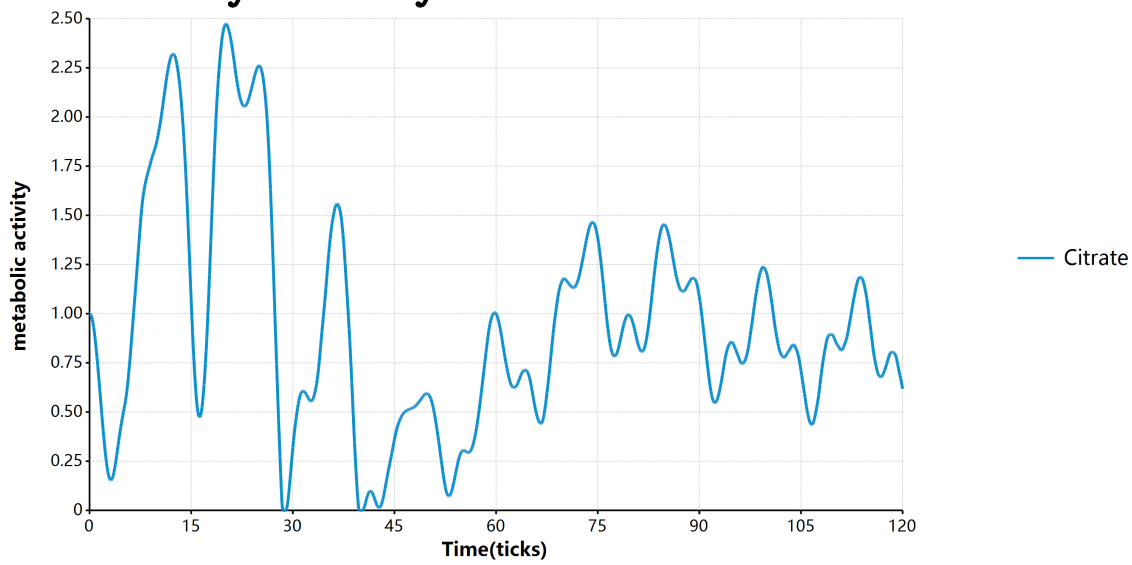
## Systems Dynamics of Butyryl phosphate



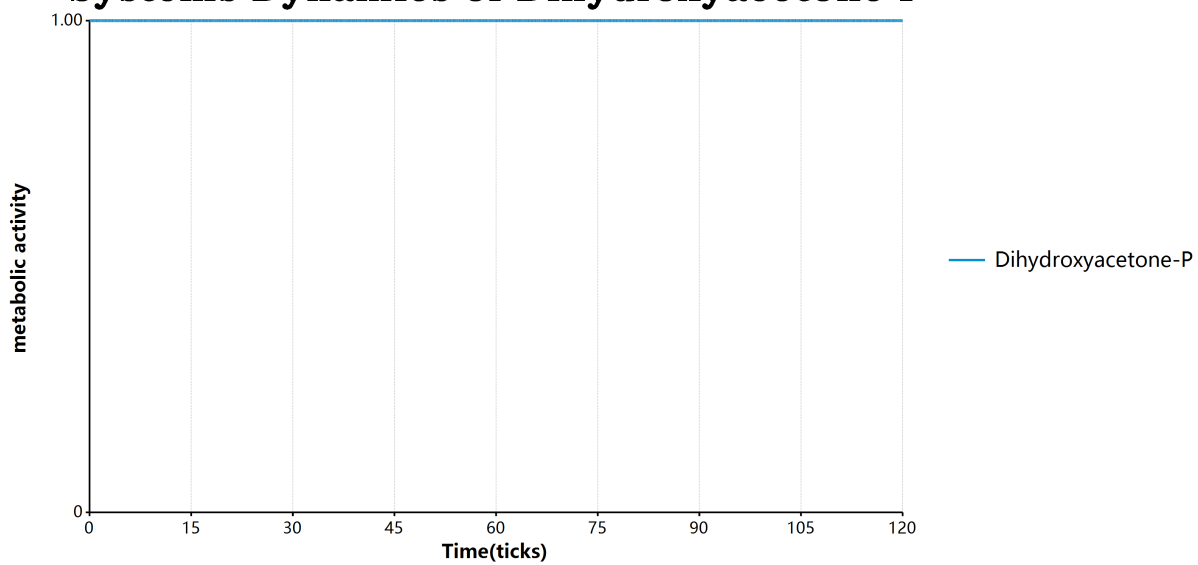
## Systems Dynamics of Butyryl-CoA



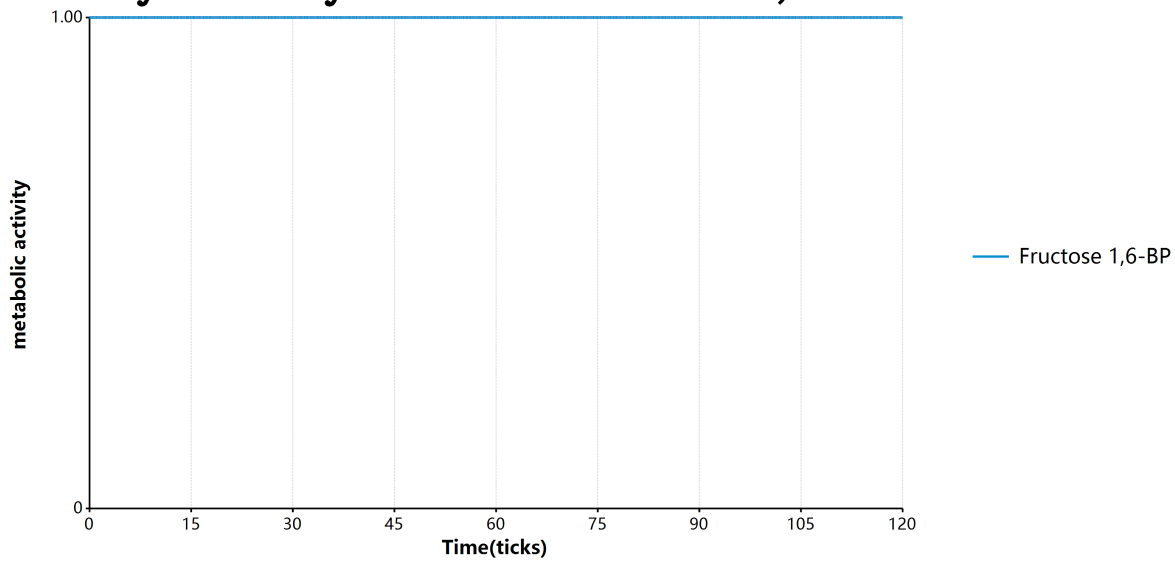
## Systems Dynamics of Citrate



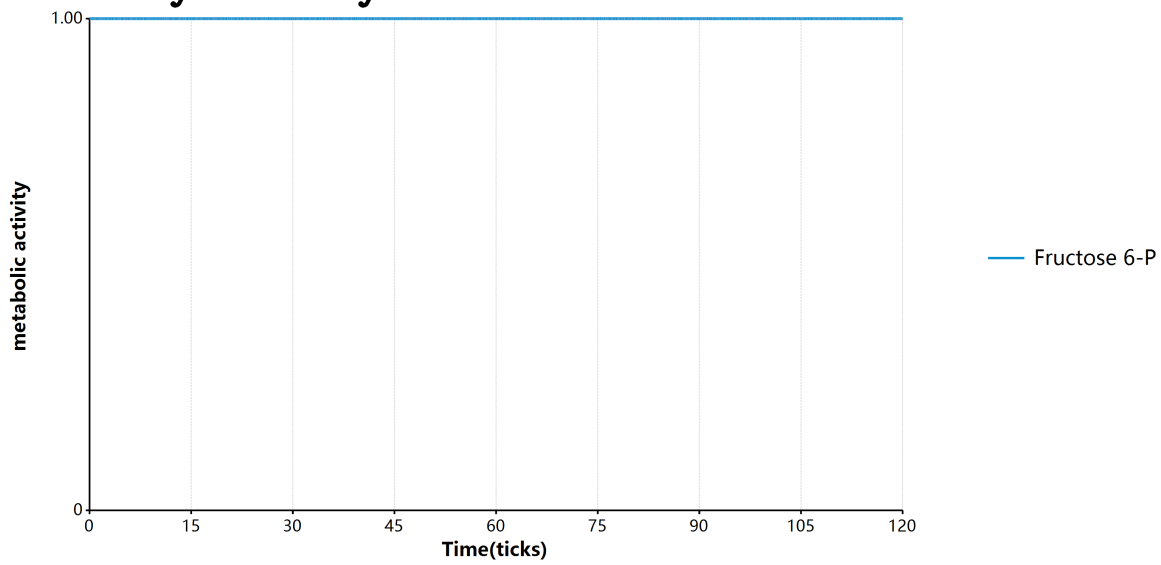
## Systems Dynamics of Dihydroxyacetone-P



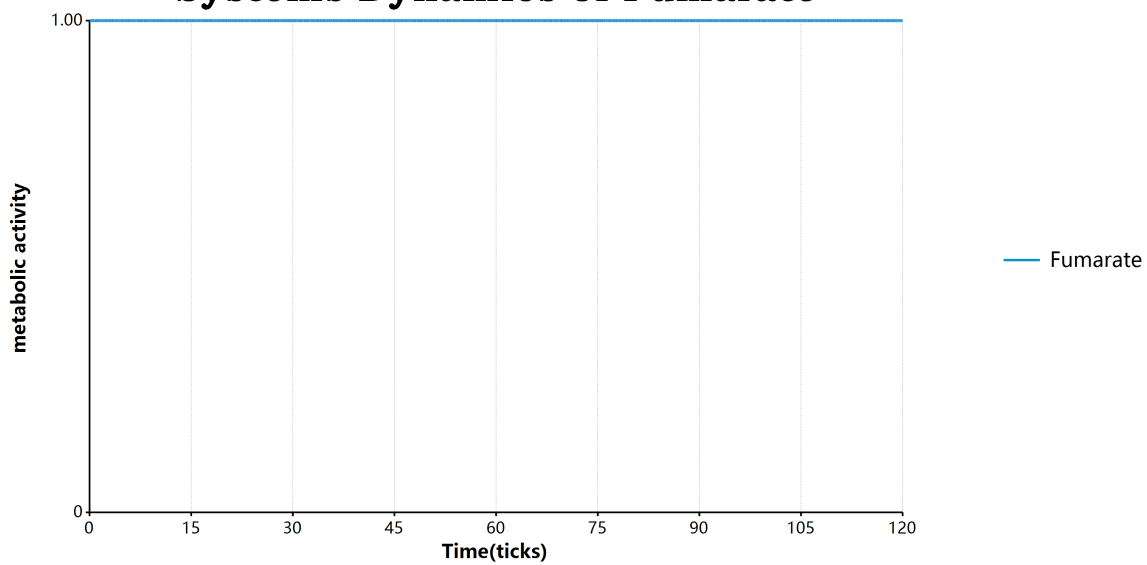
### Systems Dynamics of Fructose 1,6-BP



### Systems Dynamics of Fructose 6-P

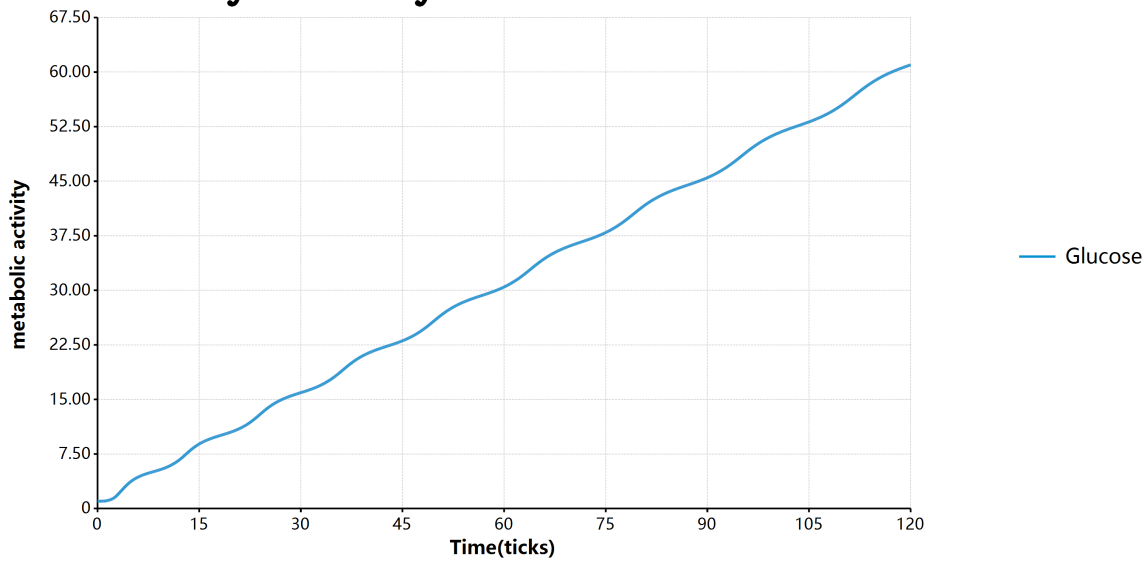


### Systems Dynamics of Fumarate

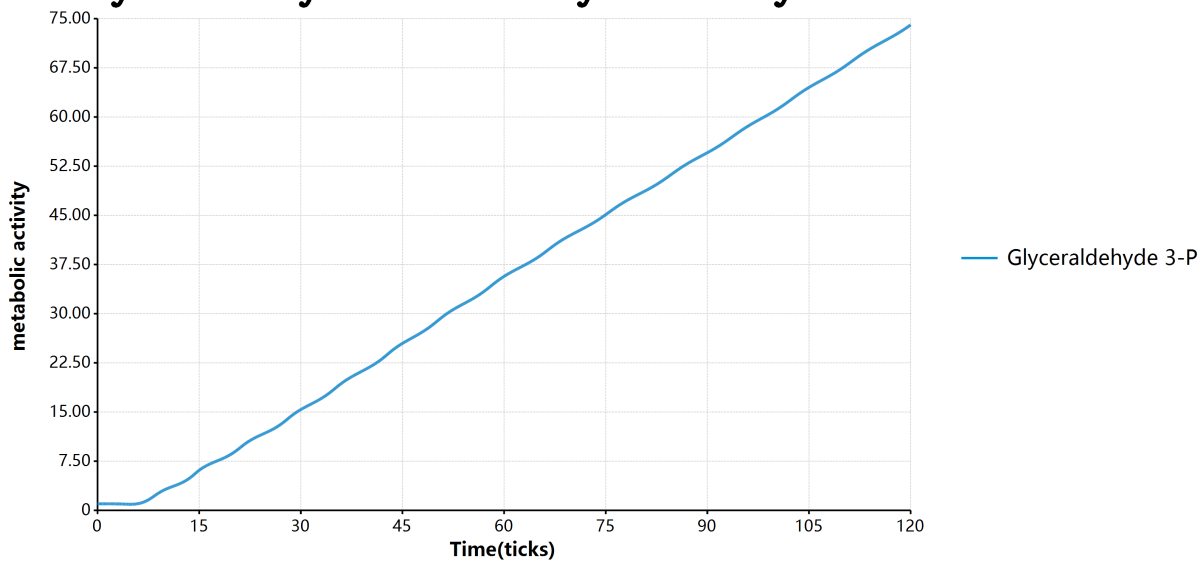




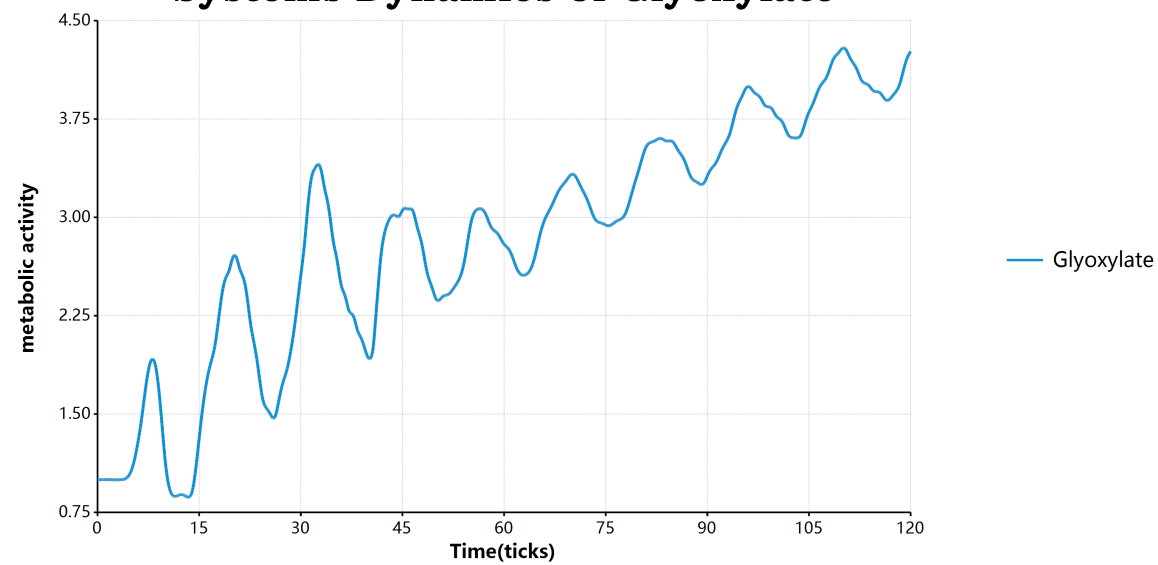
## Systems Dynamics of Glucose



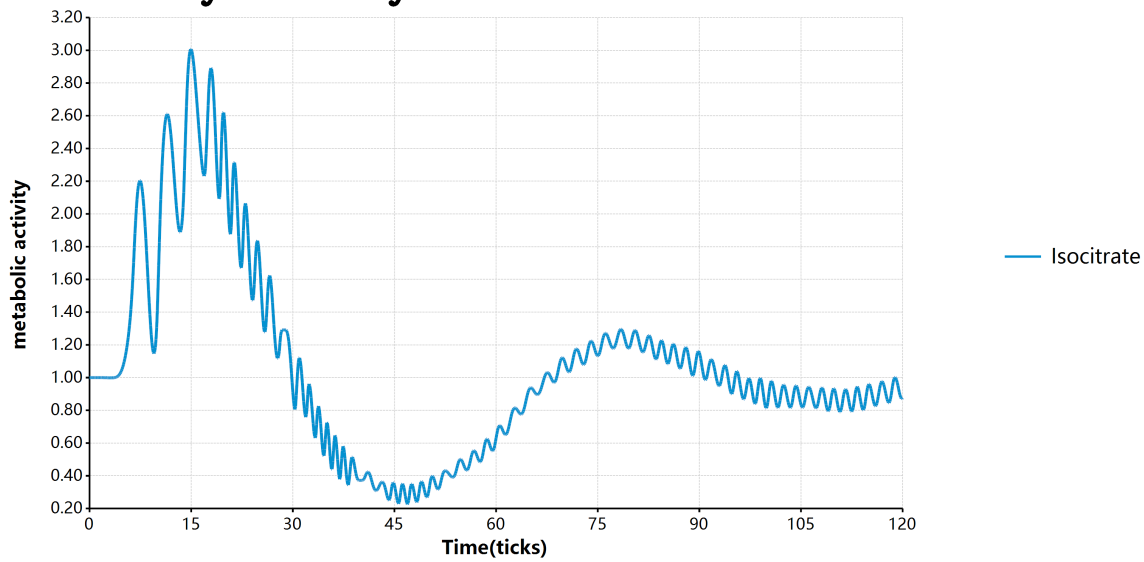
## Systems Dynamics of Glyceraldehyde 3-P



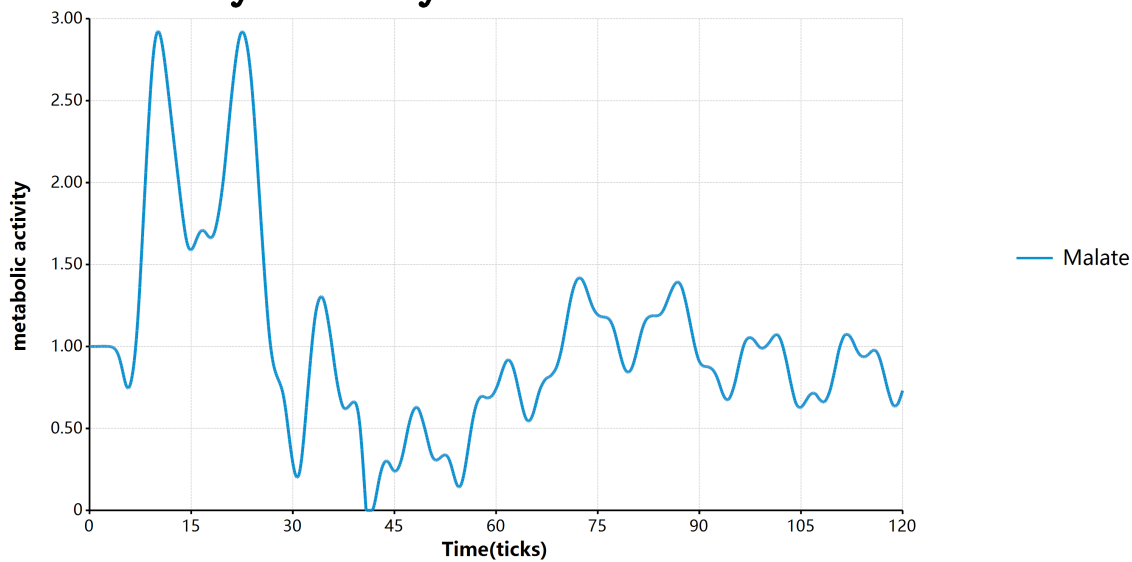
## Systems Dynamics of Glyoxylate



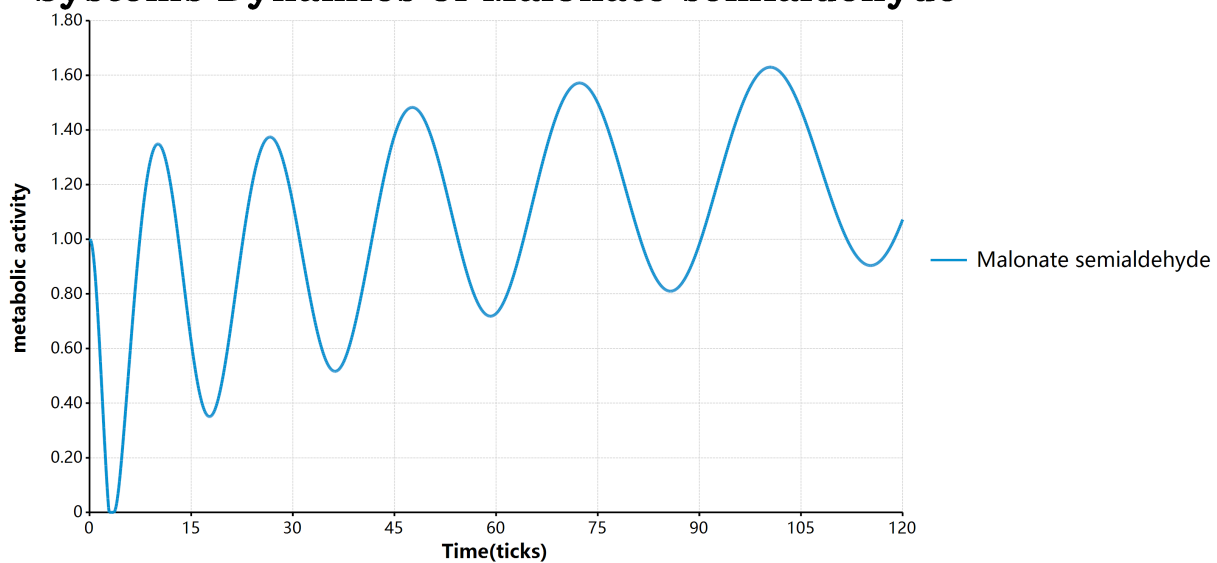
### Systems Dynamics of Isocitrate



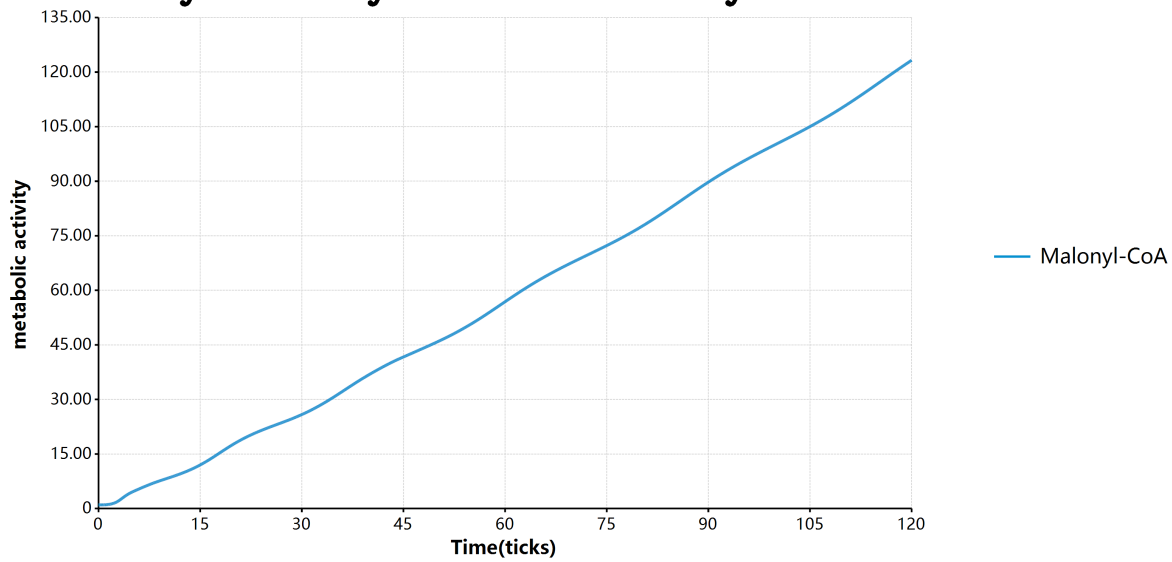
### Systems Dynamics of Malate



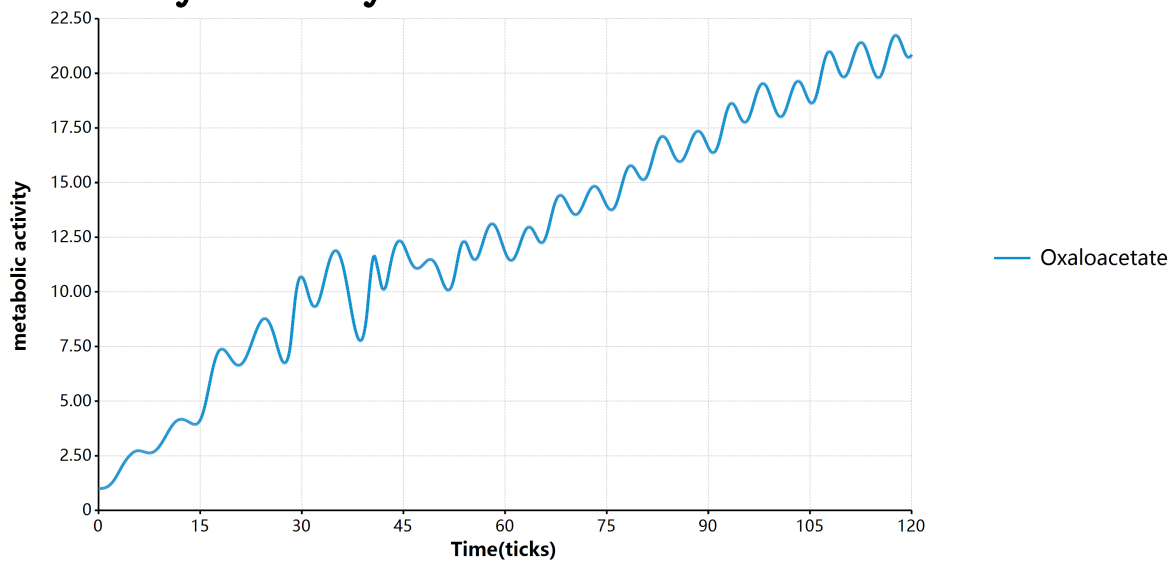
### Systems Dynamics of Malonate semialdehyde



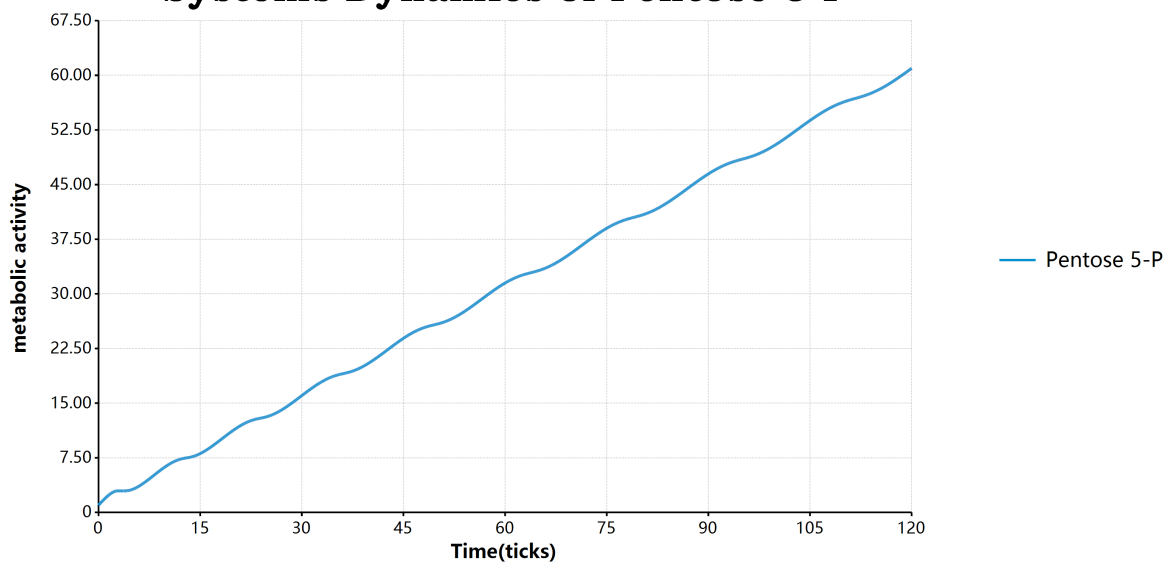
## Systems Dynamics of Malonyl-CoA



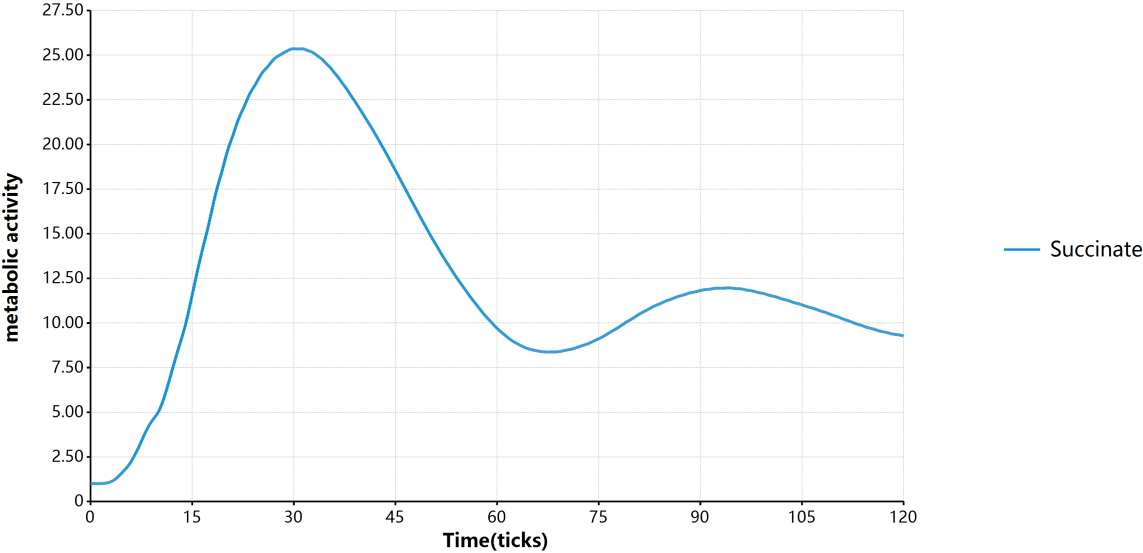
## Systems Dynamics of Oxaloacetate



## Systems Dynamics of Pentose 5-P



# Systems Dynamics of Succinate



# Systems Dynamics of Succinyl-CoA

