In silico analysis of corticosteroid-boosted antibiotics treatment for septic arthritis in a hybrid mathematical model

```
In[ ]:= T = 5150
Out[ ]= 5150
```

Antibiotic treatment without corticosteroids

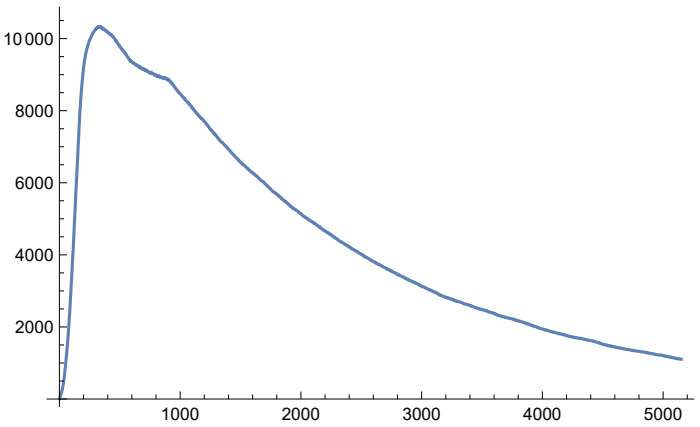
```
In[ ]:= data = Import["C:\\Users\\Juhász
         Nóra\\Documents\\HAL-master\\CorticosteroidsAntibiotics\\output\\
         StaphyloExperiments\\AntibioticsOnly\\Out.csv", "Data"];
```

Data: tick, healthy, infected, dead, bacteria, immune, AB, CS

```
In[ ]:= data[[2]]
Out[ ]= {0, 10000., 0., 0., 27.27, 10., 0., 0.}
```

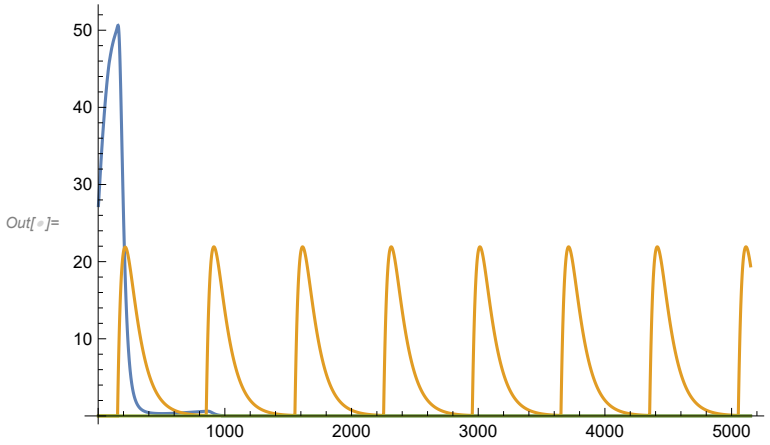
```
In[ ]:= bactData = Table[data[[i]][[5]], {i, 1, T}];
        immuneData = Table[data[[i]][[6]], {i, 1, T}];
        ABData = Table[data[[i]][[7]], {i, 1, T}];
        CSData = Table[data[[i]][[8]], {i, 1, T}];
        ListLinePlot[{immuneData}, PlotRange → All]
```

Out[ ]=



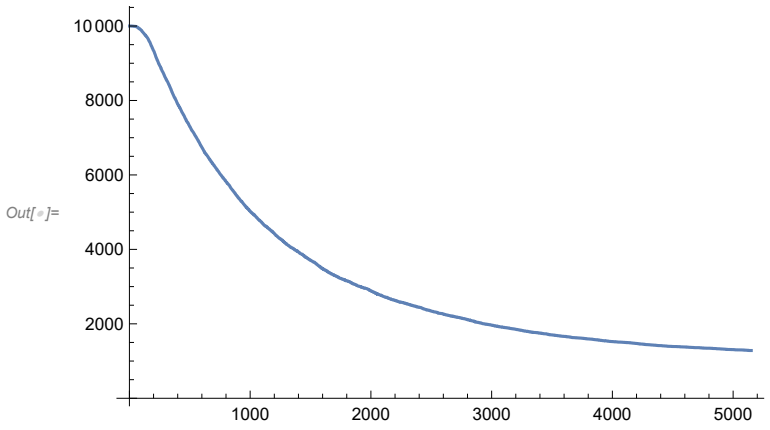
In[ ]:=
```
ListLinePlot[{bactData, ABData, CSData}, PlotRange → All]
```

Out[ ]=



In[ ]:=
```
healthyCellData = Table[data[[i]][[2]], {i, 1, T}];
ListLinePlot[{healthyCellData}, PlotRange → All]
```

Out[ ]=



Antibiotic treatment with corticosteroids

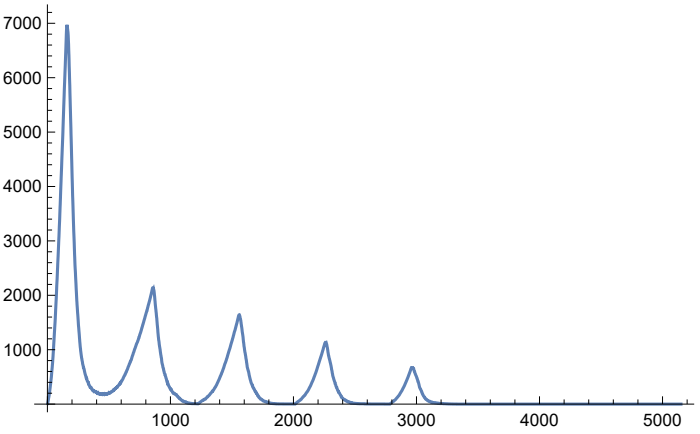
In[ ]:=
```
T = 5150
```

Out[ ]=
```
5150
```

In[ ]:=
```
dataCStrue = Import["C:\\Users\\Juhász
      Nóra\\Documents\\HAL-master\\CorticosteroidsAntibiotics\\output\\
      StaphyloExperiments\\steroidBoostedAB\\Out.csv", "Data"];
```

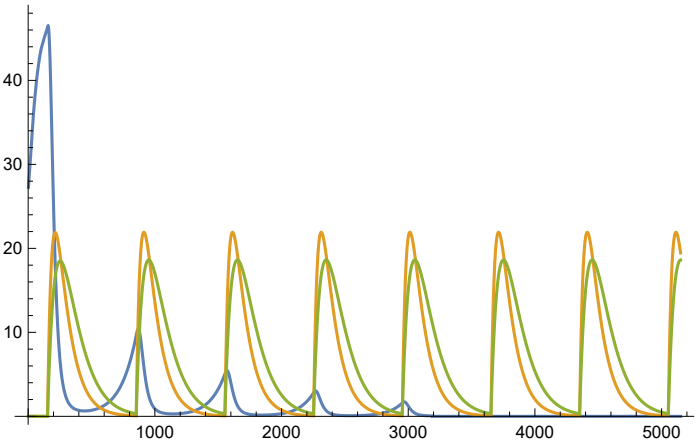
In[ ]:=
```
bactData = Table[dataCStrue[[i]][[5]], {i, 1, T}];
immuneData = Table[dataCStrue[[i]][[6]], {i, 1, T}];
ABData = Table[dataCStrue[[i]][[7]], {i, 1, T}];
CSData = Table[dataCStrue[[i]][[8]], {i, 1, T}];
ListLinePlot[{immuneData}, PlotRange → All]
```

Out[ ]=



In[ ]:=
```
ListLinePlot[{bactData, ABData, CSData}, PlotRange → All]
```

Out[ ]=



In[ ]:=

In[ ]:=
```
healthyCellData = Table[dataCStrue[[i]][[2]], {i, 1, T}];
ListLinePlot[{healthyCellData}, PlotRange → {0, 10000}]
```

Out[ ]=