**How install and use megalin steady state application**

Download and execute MegalinSteadyStateAppInstaller\_web.exe. This program will install the Megalin Steady State application and MATLAB Runtime from the web, which is required to run the application. By default, the Megalin Steady application will be in installed in C:\Program Files.

To run the application, in the command line (command prompt in Windows which can be found most easily using the Windows search box) navigate to the directory where the application is installed and then to the application sub-folder by entering:

cd C:\Program Files\MegalinSteadyStateApp\application

You can now run the application by entering:

MegalinSteadyStateApp

After running, the rate values that were inputted and the resulting steady state distribution of megalin among the endocytic compartments as a percentage of the total is displayed:

Input Kinetic Rates (% min^{-1})

k\_e 12.7

k\_{m,1} 4.8

k\_{DAT,f} 4.61

k\_{DAT,s} 1.24

k\_r 1.16

k\_{m,2} 0.936

k\_d 10.8

S 0.259

Output Megalin Steady State (% of total)

Surface 5.29

AEE 7.12

AV 27.6

DAT 57.6

Lys 2.4

By default, the application uses our experimentally predicted kinetic rates. Users can input their own rates by including the values as input arguments:

MegalinSteadyStateApp ke km1 kDATf kDATs kr km2 kd S

The input values must be numeric values only and must be entered in this order. If you desire to change fewer than 8 rates from the default values, you must enter values for all rates prior to last one you wish to change. For example, if you wish to only change by multiplying by a factor of 2 and use the default values for all the other rates, you would enter:

MegalinSteadyStateApp 12.7 4.8 9.22

And the following would be displayed:

Input Kinetic Rates (% min^{-1})

k\_e 12.7

k\_{m,1} 4.8

k\_{DAT,f} 9.22

k\_{DAT,s} 1.24

k\_r 1.16

k\_{m,2} 0.936

k\_d 10.8

S 0.259

Output Megalin Steady State (% of total)

Surface 6.01

AEE 5.44

AV 21.1

DAT 65.6

Lys 1.83