This is the readme for the models associated with the paper:

Neuroprotective role of gap junctions in a neuron astrocyte network model

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The code gap.ode requires XPPAUT, which is freely available from

<http://www.math.pitt.edu/~bard/xpp/xpp.html>

This code models 30 neurons and 30 astrocytes.

To run gap.ode:

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On linux/unix you can start with a command like: xppaut gap.ode

Then select in the XPPAUT program: (F)ile -> (R)ead set

and select the file "gap.ode.set".

Then select Integrate ->(G)o. If you then add the curves v15 and v30,

by selecting (G)raphics -> (A)dd curve, you will see the left graph below.

If you then select (V)iewaxes -> (A)rray -> OK and select Redraw in the

window that pops up, you will see the right figure below.

Graphical user interface, application

Description automatically generated

To run neuron-astrocyte.c, one needs to install the GNU Scientific Library (GSL), which is free and available from: <http://www.gnu.org/software/gsl/>

Then compile the code with the instruction:  
gcc nmda\_full\_int\_eps.c -o program -lm -lgsl -lgslcblas