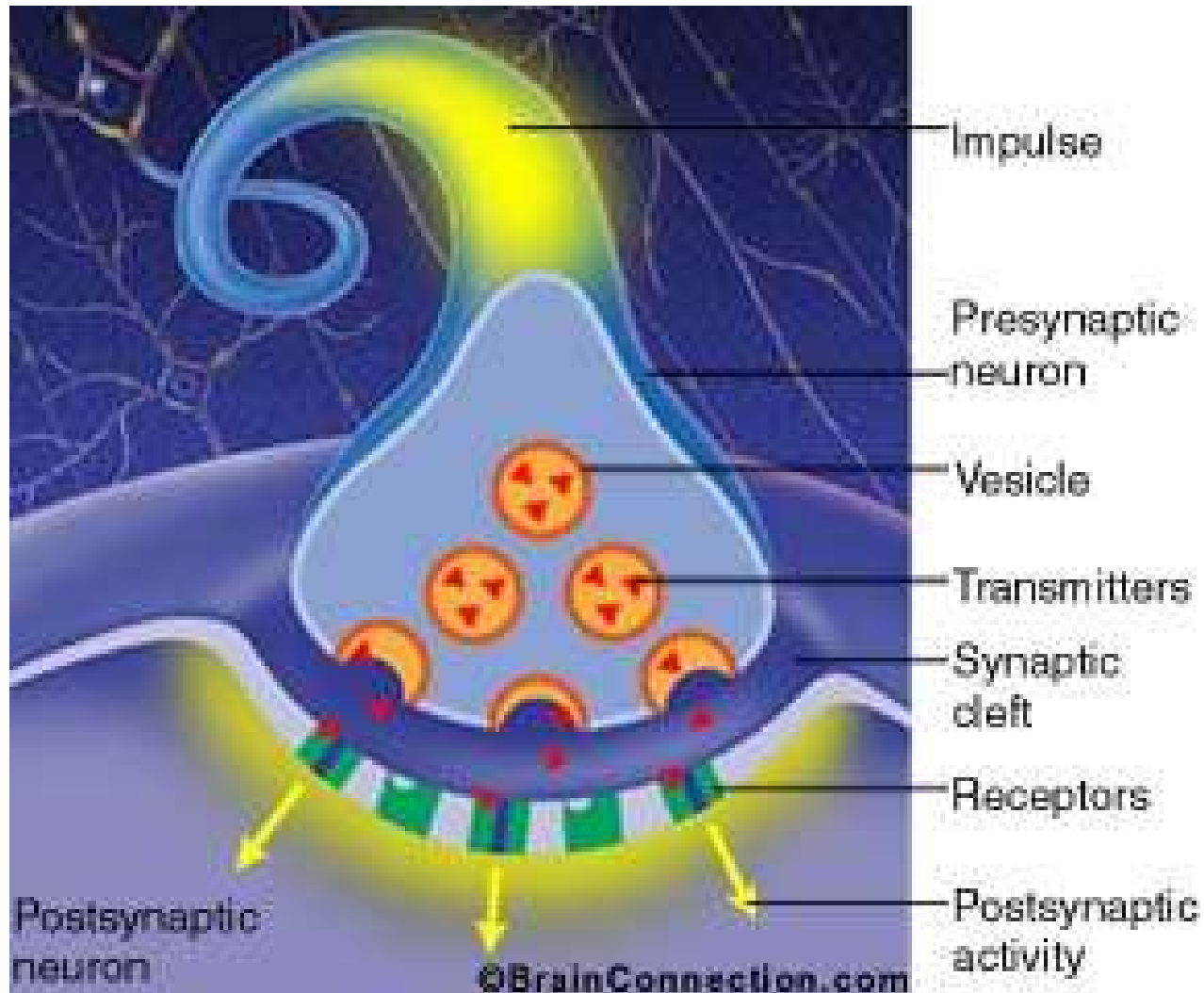


# Action potential propagation on a neural network

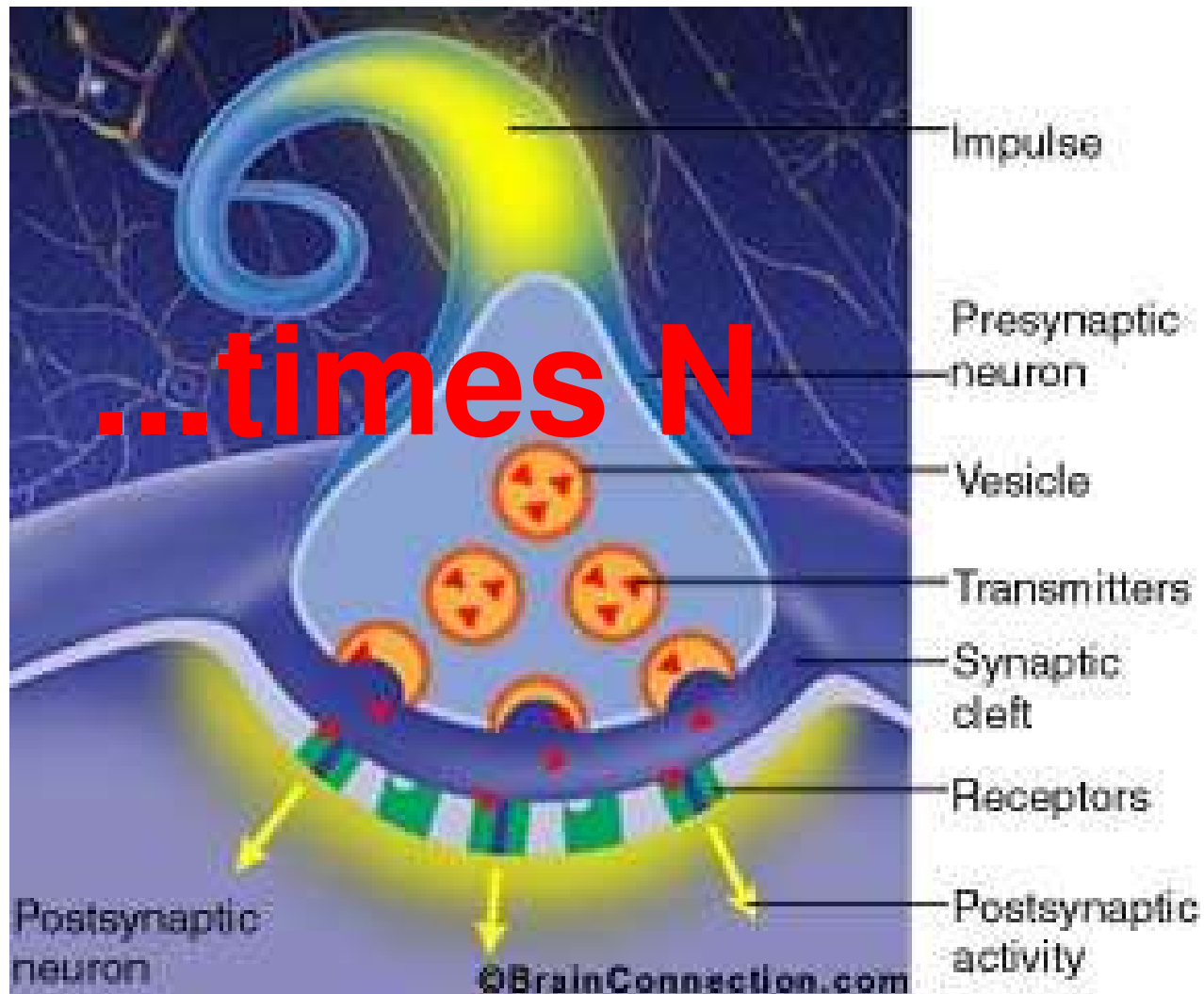
Diogo Camacho, Dean Gull and Aniel Nieves

with  
Charlie Peskin

# Motivation



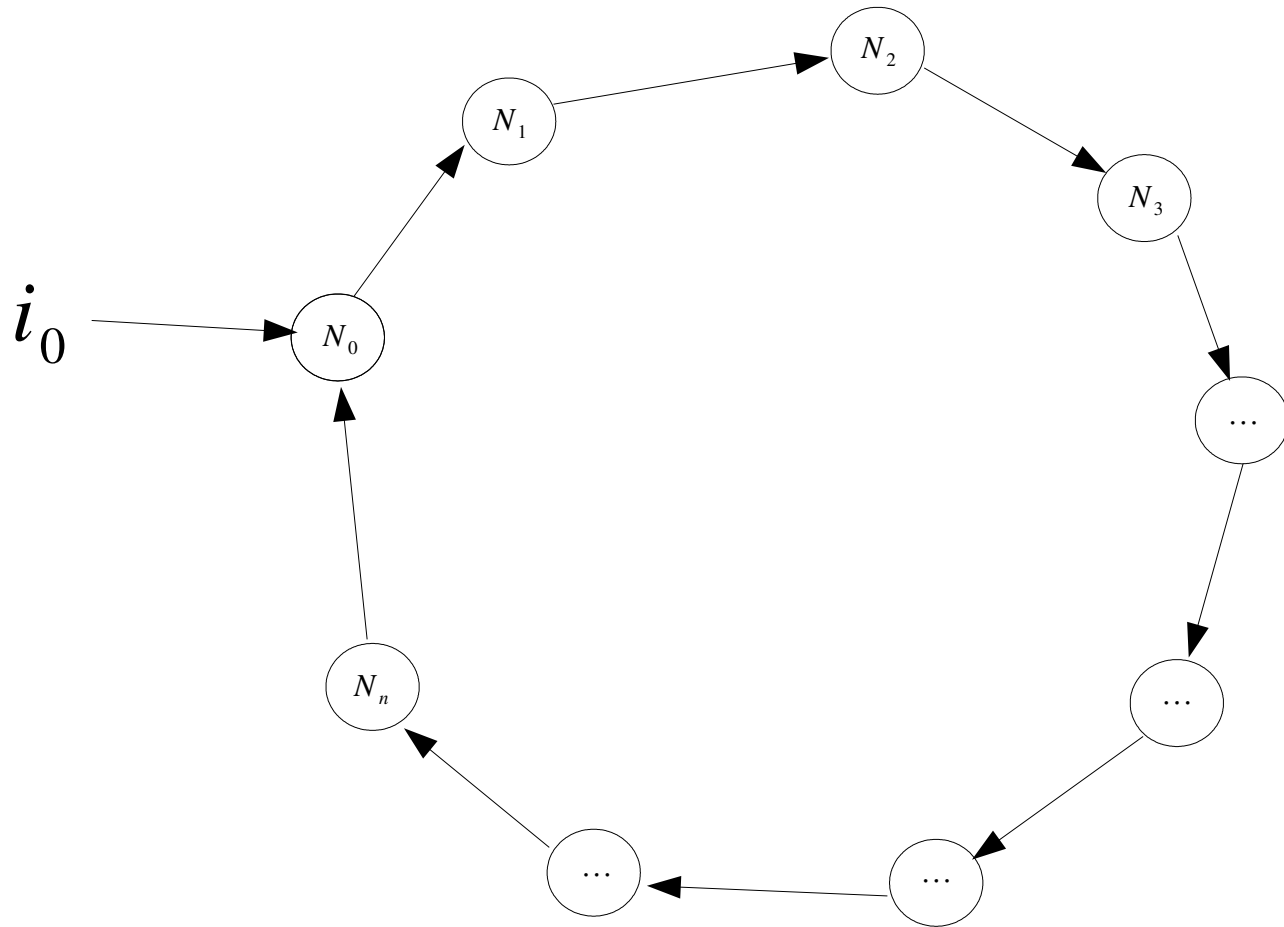
# Motivation



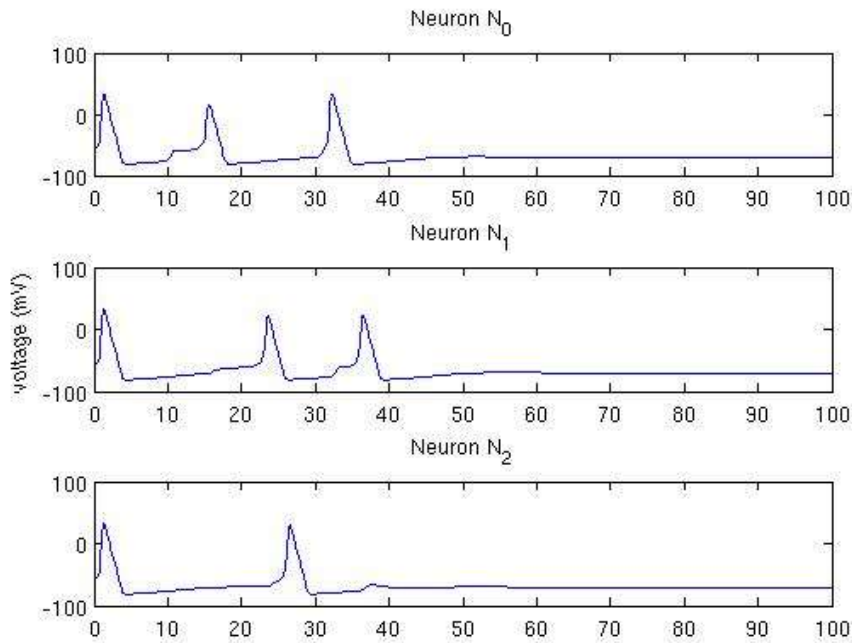
# Method

- Expand the Hodgkin-Huxley model for a multi-neuron network
- Include the influx of calcium ions into the pre-synaptic neuron and treat the synaptic current as a function of the calcium current

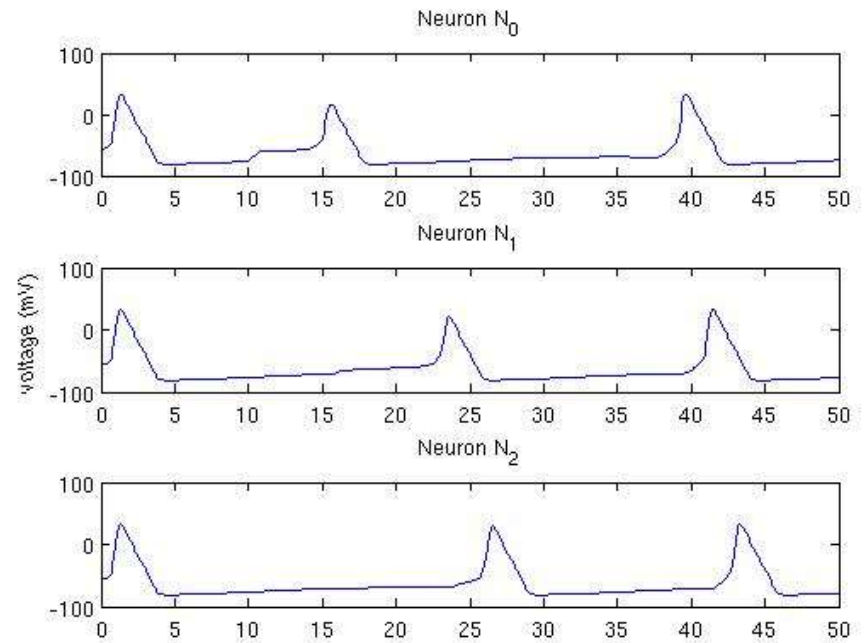
# Network



# Propagation of the action potential

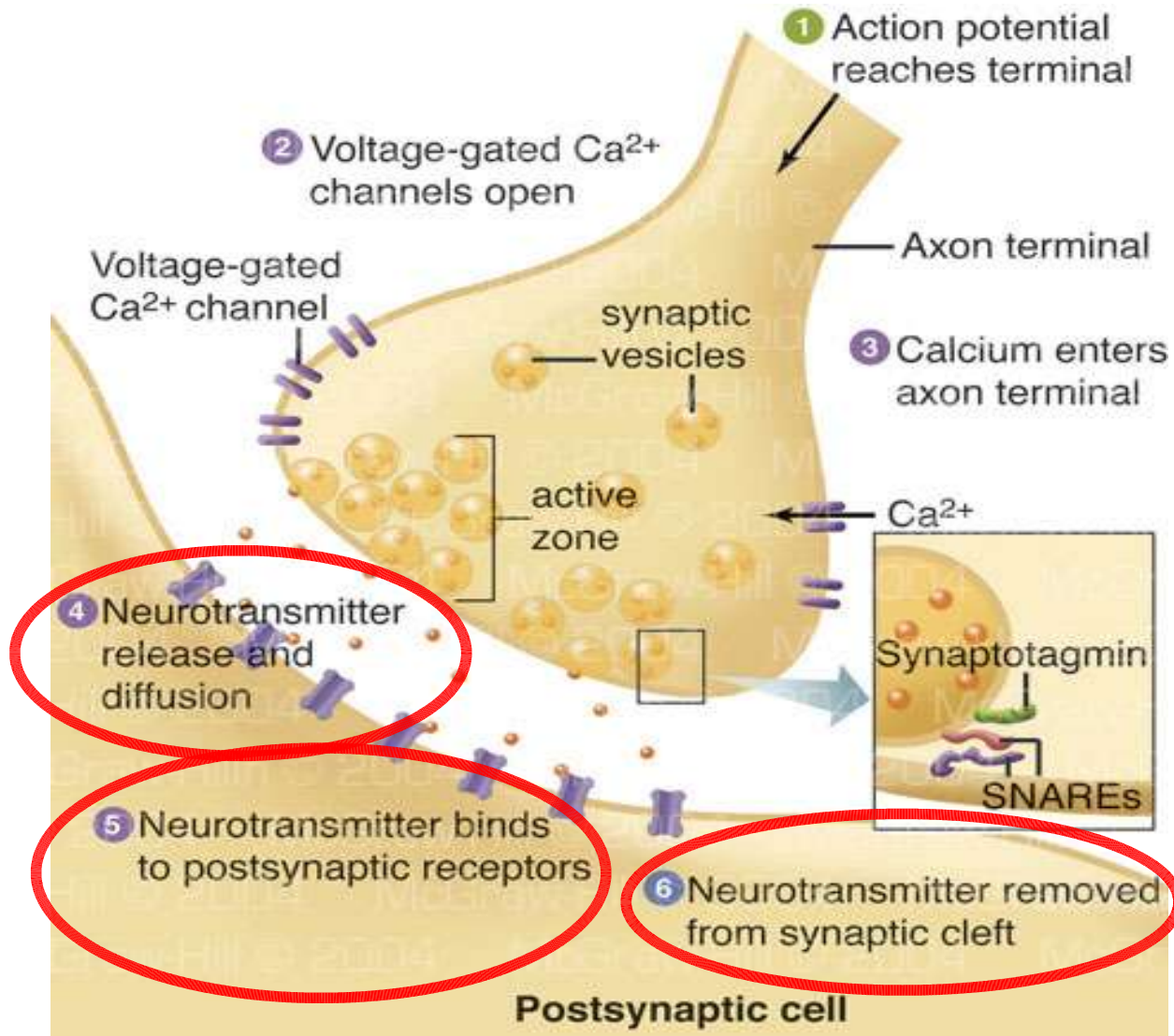


Short network (5 neurons)



Long network (9 neurons)

# What else can be done?



# What else can be done?

