A

...
// -- End Antimony block

// Create five models with different Hill
// coefficients to explore the effect of m

model\_m\_1 = model "wolf2001" with m=1
model\_m\_2 = model "wolf2001" with m=2
model\_m\_4 = model "wolf2001" with m=4
model\_m\_8 = model "wolf2001" with m=8
model\_m\_16 = model "wolf2001" with m=16

Hill coefficients

```
// The value of m may affect the timescale of the
// dynamics, so simulate on two different timescales
sim_short = simulate uniform(0, 100, 5000)
sim_long = simulate uniform(0, 200, 5000)
```

// Run each simulation / Hill coef. combo
m1\_short = run sim\_short on model\_m\_1
m2\_short = run sim\_short on model\_m\_2
m4\_short = run sim\_short on model\_m\_4
m8\_short = run sim\_short on model\_m\_8
m16\_short = run sim\_short on model\_m\_16

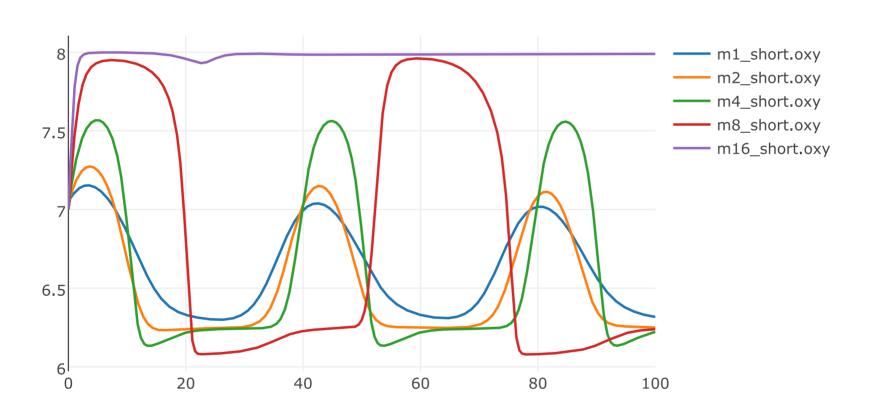
// -- Begin PhraSEDML block converted from main.xml

Create two simulations with different time scales

```
m1_long = run sim_long on model_m_1
m2_long = run sim_long on model_m_2
m4_long = run sim_long on model_m_4
m8_long = run sim_long on model_m_8
m16_long = run sim_long on model_m_16

// Plot the results
plot "Oxygen (short duration)" m1_short.time vs m1_short.oxy, m2_short.oxy,
m4_short.oxy, m8_short.oxy, m16_short.oxy
plot "Oxygen (long duration)" m1_long.time vs m1_long.oxy, m2_long.oxy, m4_long.oxy,
m8_long.oxy, m16_long.oxy
```

## Oxygen (short duration)



## Oxygen (long duration)

