The model in 'network.txt' is a compactly complex model which just contains 2 devices but each one includes a complicated ODEs. Those equations are listed here.

For pTara,

$$\frac{dx_1}{dt} = -20 \times x_1 \times OD$$

$$\frac{dy}{dt} = (-3 \times x_1 + 5.2 \times OD^2 - 5 \times y) \times OD$$

where OD is optical density and x_1 is the input of device pTara, i.e., arabinose. Meanwhile, y is the output of device pTara and input of device pET28.

For pET28,

$$\frac{dz}{dt} = (50000 \times y - 5 \times z) \times OD$$

where z is the output of device pET28, i.e., the value of GFP.