**Predator-prey ecosystem**

lasR

rhlI

tetR

lysE

LasR

RhlI

TetR

lysE

lasI

LasI

RhlR

rhlR

Chemical Reactions – Predator Prey

**Predator**

**Prey**

**Cell growth/death dynamics (c1 = predator, c2 = prey)**

**Rock-paper-scissors ecosystem**

lasR

lysE

rhlR

lysE

luxI

lysE

luxR

lasI

rhlI

Chemical reaction in each cell type will essentially be identical to those in the prey cell from the predator-prey ecosystem, but with the appropriate quorum sensing genes and lysE promoter. The only difference will be that the HSLs can diffuse into all three cell types.