

IntegratedModel

BooleanModel : BooleanComponents + BooleanRules

InitialiseBooleanModel
initialiseBooleanModel()

Boolean
iterateBooleanModel!()
knockout!()
runBooleanModel!()

FBAModel : JuMP linear program

InitialiseJuMPModel
initialiseJuMPModel()
prepareChemostatExperiment()
prepareLifespanExperiment()
getIsoenzymes()

FBA
updateGAMvalue!()
pFBA!()
calculateFVA()
calculateEVA()
mapEnzymeIdx()
calculateECC()

ODEModel : linear system of differential equations

InitialiseODEModel
initialiseODEModel()

DamageODE
solveODE!()
division!()

Integration

triggerSignalling!() readTranscriptionalTargets() getExpressionRanks() regulateFBA!()

Cell : FBAModel + BooleanModel + ODEModel

Cell
createCell() getRelevantReferences() simulateLife!()