```mathematica
In[1]:= h⁺[p_, θ_, n_] := pⁿ / (pⁿ + θⁿ)
        h⁻[p_, θ_, n_] := 1 - h⁺[p, θ, n]

        tmax = 200;

        With[{ma = 2., mb = 2.,
              na = 2.4, nb = 2.4,
              θa = 0.28, θb = 0.28,
              ka = 1., kb = 1.,
              γa = 1., γb = 1.,
              δa = 1., δb = 1.},
                sol = NDSolve[{rₐ'[t] == ma * h⁺[pᵦ[t], θb, nb] - γa * rₐ[t],
                              rᵦ'[t] == mb * h⁻[pₐ[t], θa, na] - γb * rᵦ[t],
                              pₐ'[t] == ka * rₐ[t] - δa * pₐ[t],
                              pᵦ'[t] == kb * rᵦ[t] - δb * pᵦ[t],
                              rₐ[0] == 0, rᵦ[0] == 0, pₐ[0] == 0.0, pᵦ[0] == 0.0},
                             {rₐ, rᵦ, pₐ, pᵦ}, {t, 0, tmax}]];


        ParametricPlot[Evaluate[{pₐ[t], pᵦ[t]} /. First[sol]], {t, 0, tmax},
         AxesLabel → {pₐ, pᵦ}, ColorFunction → "Rainbow", PlotRange → Full]

        Plot[Evaluate[{pₐ[t], pᵦ[t]} /. First[sol]], {t, 0, tmax}, PlotLegends → {"pₐ", "pᵦ"}]

        Animate[ParametricPlot[
          Evaluate[{pₐ[t], pᵦ[t]} /. First[NDSolve[{rₐ'[t] == ma * h⁺[pᵦ[t], θb, nb] - γa * rₐ[t],
                              rᵦ'[t] == mb * h⁻[pₐ[t], θa, na] - γb * rᵦ[t],
                              pₐ'[t] == ka * rₐ[t] - δa * pₐ[t],
                              pᵦ'[t] == kb * rᵦ[t] - δb * pᵦ[t],
                              rₐ[0] == 0, rᵦ[0] == 0, pₐ[0] == 0.0, pᵦ[0] == 0.0},
                             {rₐ, rᵦ, pₐ, pᵦ}, {t, 0, tmax}]]], {t, 0, tmax},
          AxesLabel → {pₐ, pᵦ}, ColorFunction → "Rainbow", PlotRange → Full],
         {ma, 1., 10.}, {mb, 1., 10.}, {na, 2., 5.}, {nb, 2., 5.},
         {θa, 0.2, 1.}, {θb, 0.2, 1.}, {ka, 1., 5.}, {kb, 1., 5.},
         {γa, 1., 5.}, {γb, 1., 5.}, {δa, 1., 5.}, {δb, 1., 5.}, AnimationRunning → False]
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Out[5]=

Out[6]=

Out[7]=