```
final simplex: (array([[6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825995e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
              ['SM data type data plots for mutation', 'OutoutBilde 4e+02, 6.55740303e+04 Initial Guess 5e-03, 3.07825994e-01, 2.72924107e+00, 2.82613287e+00 Initial Guess 5e+00], cer -> sensor (GFP output) inducer -> S[6|55989894409,1.6466808 5e+04 Converged 3e+03, 1.14464337e+00,
      inducer -> sensor (GFP output)
                                                                                           1.86390024e+03, 1.2205290 - - - 5 Converged 7e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.55740303e+04Converged 5e-03, 3.07825994e-01,
10^{4}
                                                                                           2.72924107e+00, 2.82613287e+0
                                                                                                                                                           5e+00],
                                                                                          [6.55908984e+02, 1.6466808 e+0 4 Converged 3 e+03, 1.14464337e+00,
                                                          4 \times 10^{3}
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                           1.76771864e+02, 6.$5740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                          3 \times 10^3
                                                                                           2.7292410<mark>7</mark>e+00, 2.$2613287e+00, 1.33151215e+00],
                                                                                             .55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00, .86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01, 76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
10^{3}
                                                          2 \times 10^{3}
                                                                                           2.72924107e+0<mark>0</mark>, 2.$2613287e+00, 1.33151215e+00],
                                                                                           6.55908984e+02.1.64668089e+04, 1.22141533e+03, 1.14464337e+00, 1.86390624e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                10^{-4}
                           10^{-3}
                                      10^{-2}
                                                  10^{-1}
                                                                   10^{-5}
                                                                               10^{-4}
                                                                             Full circult Ղարել 26/160-602, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
         inducer -> S -| Output (GFP)
                                                                                                       <del>[07e+00, 2.</del>82613287e+00, 1.33151215e+00],
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                          4 \times 10^{3}
                                                                                             .86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                                                             √6771864e+02, 6.$5740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                          3 \times 10^{3}
10^{4}
                                                                                           2.72924107e+00, 2.$2613287e+00, 1.33151215e+00],
                                                                                             .559<del>08984</del>e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                              86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                                                          2 \times 10^{3}
                                                                                           1.76771864e+02, 6.$5740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.$2613287e+00, 1.33151215e+00],
                                                                                          [6.5590898<del>4e+02</del>, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00, 1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
10^{3}
                                                                                             <u>,76771864e+02, 🖲 $</u>5740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                               10^{3}
                                                                                           2072924107e+0012-82613287e+00, 1.33151215e+00],
    10^{-5}
                           10<sup>-3</sup>
                                      10^{-2}
                                                                    10^{-5}
                                                                              10^{-4}
                10^{-4}
                                                  10^{-1}
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
             Across all four plots:
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                RSS (converged)=0.075
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329106e-01, 7.16154373e-01,
                RSS (initial) = 0.975
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825993e-01,
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00],
                RSS (% reduction)=0.929
                                                                                          [6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                           1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
                        epsilon Initial guesses
                                                           Converged
                                                                                           1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                    47.511881
                                         608.397103
                                                             655.908984
                                                                                           2.72924107e+00, 2.82613287e+00, 1.33151215e+00]]), array([0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.074988, 0.074988, 0.074988, 0.0749888, 0.074888, 0.074888, 0.074888, 0.0748888, 0.074888, 0.074888, 0.0748888, 0.0
                                         15250.457700 16466.808888
            B s 1216.351188
                                                                                          0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248,
            C s -446.643715
                                         1668.059050 1221.415335
                                                                                          0.07493248, 0.07493248, 0.07493248, 0.07493248, 0.07493248,
            Νs
                     -0.054290
                                          1.198934
                                                            1.144643
                                                                                          0.07493248]))
                                          687.964693 1863.900236
             A r 1175.935543
                                                                                             fun: 0.0749324830857175
                                          23497.611400 122052.904856
            Br 98555.293456
                                                                                          message: 'Optimization terminated successfully.'
                     0.142962
                                          0.062367
            Сr
                                                            0.205329
                                                                                            nfev: 18810
                     0.324423
                                          0.391731
            Νr
                                                            0.716154
                                                                                             nit: 14246
            A h -413.834684
                                          590.606548 176.771864
                                                                                           status: 0
                                          35287.125700 65574.030298
            B h 30286.904598
                                                                                          success: True
            C h
                      0.001249
                                          0.000530
                                                             0.001779
                                                                                               x: array([6.55908984e+02, 1.64668089e+04, 1.22141533e+03, 1.14464337e+00,
                                                                                          1.86390024e+03, 1.22052905e+05, 2.05329107e-01, 7.16154373e-01,
            Αо
                     -0.522004
                                          0.829830
                                                             0.307826
                     -1.558929
                                          4.288170
                                                             2.729241
                                                                                          1.76771864e+02, 6.55740303e+04, 1.77889455e-03, 3.07825994e-01,
                     -0.307089
                                          3.133222
                                                             2.826133
                                                                                          2.72924107e+00, 2.82613287e+00, 1.33151215e+00])
                     -0.477506
                                          1.809018
                                                             1.331512
            N_o
```