final_simplex: (array([[6.60009484e+02, 1.61583502e+04, 1.32105312e+03, 1.17804007e+00,
4.48403432e+03, 4.55862949e+03, 6.39543535e-04, 2.62603158e+00,
9.04271983e+00, 6.20261293e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
[6.60009484e+02, 1.61583503e+04, 1.32105312e+03, 1.17804007e+00,
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9.04271983e+00, 6.20261293e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271980e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
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9.04271984e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
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9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271980e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
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9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271981e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
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9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00],
[6.60009484e+02, 1.61583502e+04, 1.32105312e+03, 1.17804007e+00,
4.48403432e+03, 4.55862949e+03, 6.39543536e-04, 2.62603158e+00,
9.04271982e+00, 6.20261294e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00]]), array([0.05215984, 0.05215984, 0.05215984, 0.05215984, 0.05215984,
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0.05215984, 0.05215984, 0.05215984, 0.05215984, 0.05215984,
0.05215984]))
fun: 0.052159835765045286
message: 'Optimization terminated successfully.'
nfev: 33793
nit: 25805
status: 0
success: True
x: array([6.60009484e+02, 1.61583502e+04, 1.32105312e+03, 1.17804007e+00,
4.48403432e+03, 4.55862949e+03, 6.39543535e-04, 2.62603158e+00,
9.04271983e+00, 6.20261293e+04, 1.25910635e-03, 1.27356981e+01,
4.49385943e+00, 2.51649085e+00, 1.27625619e+00])

['SM data type data plots for mutation', 'Regulator22']

inducer -> sensor (GFP output)

inducer -> S -| R (GFP output)

inducer -> S -| Output (GFP)

Full circuit with stripe

Legend:
- Initial Guess
- Converged
- Converged
- Converged
- Converged

Across all four plots:

RSS (converged)=0.052

RSS (initial)=1.367

RSS (% reduction)=0.963

	epsilon	Initial_guesses	Converged
A_s	51.612381	608.397103	660.009484
B_s	907.892550	15250.457700	16158.350250
C_s	-347.005933	1668.059050	1321.053117
N_s	-0.020893	1.198934	1.178040
A_r	3796.069628	687.964693	4484.034321
B_r	-18938.981913	23497.611400	4558.629487
C_r	-0.061728	0.062367	0.000640
N_r	2.234301	0.391731	2.626032
A_h	-581.563828	590.606548	9.042720
B_h	26739.003638	35287.125700	62026.129338
C_h	0.000729	0.000530	0.001259
A_o	11.905868	0.829830	12.735698
B_o	0.205689	4.288170	4.493859
C_o	-0.616731	3.133222	2.516491
N_o	-0.532762	1.809018	1.276256