In[34]:=
```
experiments = {
   "EYrainbow_glucose",
   "EYrainbow_glucose_largerBF",
   "EYrainbow_rapamycin_1stTry",
   "EYrainbow_rapamycin_CheckBistability",
   "EYrainbow_1nmpp1_1st",
   "EYrainbow_leucine_large",
   "EYrainbowWhi5Up_betaEstrodiol"
  };
data = Import[FileNameJoin[{NotebookDirectory[], "fitCellSizeWithOrganelle_normal.csv"}],
   "Data", "HeaderLines" → 1];
epsilon = 10^(-18);
filled = data /. {0. → epsilon};
washed = Select[data, Function[x, NoneTrue[x, # == 0 &]]];
```

In[39]:=
```
(* Check data *)
Position[filled, 0.]
Position[washed, 0.]
```

Out[39]=
```
{}
```

Out[40]=
```
{}
```

In[41]:=
```
Length[filled]
Length[washed]
```

Out[41]=
```
9744
```

Out[42]=
```
6214
```

In[48]:=
```
fitCellSizeFromOrganelles[dataset_] := Module[
  {expr, a, b, c, alpha, mean, n, nlm, params,
   fittedFunc, fitted, fittedMin, fittedMax, dataMin, dataMax},
  expr = Sum[a[i] × n[i] × mean[i]^alpha[i], {i, 1, 6}] + Sum[n[i] × mean[i]^alpha[i] ×
      b[i, j] × n[j] × mean[j]^alpha[j], {i, 1, 5}, {j, i + 1, 6}] + c;
  nlm = NonlinearModelFit[
    dataset[[All, 2 ;;]], expr,
    Join[
     Table[a[i], {i, 1, 6}],
     Flatten[Table[b[i, j], {i, 1, 5}, {j, i + 1, 6}]],
     {c},
     Table[alpha[i], {i, 1, 6}]
    ],
    Join[
     Table[mean[i], {i, 1, 6}],
     Table[n[i], {i, 1, 6}]
    ],
    MaxIterations → ∞
```

```
    ];
  params = nlm["BestFitParameters"];
  Print["a[i]: ", Table[a[i], {i, 1, 6}] /. params];
  Print["b[i,j]: ", Table[b[i, j], {i, 1, 6}, {j, 1, 6}] /. params // MatrixForm];
  Print["c: ", c /. params];
  Print["alpha[i]: ", Table[alpha[i], {i, 1, 6}] /. params];
  Print["Adjusted R Square: ", nlm["AdjustedRSquared"]];
  Print["p-values for parameter z-statistics: ", nlm["ParameterPValues"]];
  Print["t-statistics for parameter estimates: ", nlm["ParameterTStatistics"]];
  fittedFunc = Function[
    vec,
    expr /. params
      /. Table[n[i] → vec[[i]], {i, 1, 6}]
     /. Table[mean[i] → vec[[i + 6]], {i, 1, 6}]
   ];
  fitted = Map[fittedFunc, dataset[[All, 2 ;; -2]]];
  fittedMin = Min[fitted];
  fittedMax = Max[fitted];
  dataMin = Min[dataset[[All, -1]]];
  dataMax = Max[dataset[[All, -1]]];
  Print[Show[
    ListPlot[
     Transpose[{dataset[[All, -1]], fitted}],
     PlotTheme → "Scientific"
    ],
    Plot[x, {x, 0, dataMax}]
   ]];
  Print[""]
 ]
```

In[49]:=
```
Print["All Experiments, Null Organelles filled with 0:"];
fitCellSizeFromOrganelles[filled];
```

All Experiments, Null Organelles filled with 0:

a[i]: {2.64903, 0.319275, 0.0628447, 0.146391, 2.59413, −2.32901}

b[i,j]:

b$17844[1, 1]	−0.00162656	0.000492928	−0.030026	0.0494521	0.103361
b$17844[2, 1]	b$17844[2, 2]	1.69267×10^{-6}	−0.000879273	−0.00193606	−0.00149458
b$17844[3, 1]	b$17844[3, 2]	b$17844[3, 3]	−0.000079656	−0.0000426997	−0.00078432
b$17844[4, 1]	b$17844[4, 2]	b$17844[4, 3]	b$17844[4, 4]	0.0525309	−0.0280443
b$17844[5, 1]	b$17844[5, 2]	b$17844[5, 3]	b$17844[5, 4]	b$17844[5, 5]	0.0559782
b$17844[6, 1]	b$17844[6, 2]	b$17844[6, 3]	b$17844[6, 4]	b$17844[6, 5]	b$17844[6, 6]

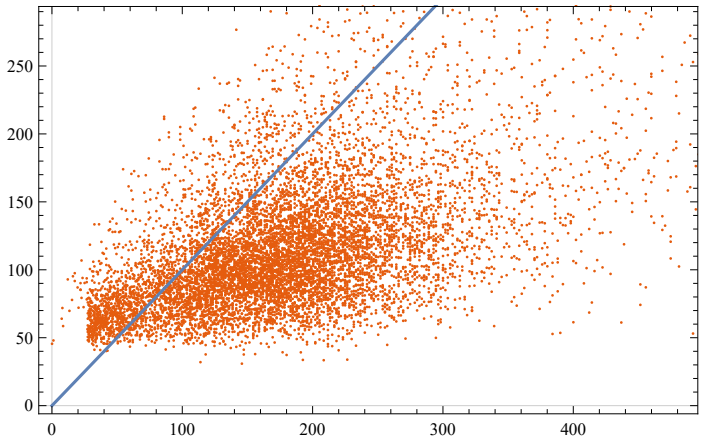
c: 45.5318

alpha[i]: {0.895575, 1.33969, 1.98626, −0.73078, 0.686293, 1.2587}

Adjusted R Square: 0.953567

p-values for parameter z-statistics:
{2.36303×10^{-10}, 1.35735×10^{-16}, 0.000182802, 0.100506, 3.73562×10^{-50}, 7.36639×10^{-8}, 0.000044572, 0.057952, 0.00141744, 0.0405456, 0.000511704, 0.56153, 0.0000917503, 0.0000164045, 0.0821526, 0.116694, 0.626644, 0.0158957, 1.04143×10^{-24}, 0.00305119, 0.0123806, 4.14221×10^{-91}, 9.20425×10^{-124}, 0., 6.42577×10^{-159}, 4.33698×10^{-58}, 0., 3.88369×10^{-24}}

t-statistics for parameter estimates:
{6.34239, 8.28321, 3.74311, 1.64256, 14.9774, −5.38615, −4.08426, 1.89628, −3.192, 2.04842, 3.47572, 0.58059, −3.91307, −4.3111, −1.73851, −1.56894, −0.486472, −2.41172, 10.2905, −2.96328, 2.50157, 20.4583, 24.0061, 53.2415, 27.3673, −16.1749, 88.0526, 10.1616}



In[51]:=
```
Print["All Experiments, Null Organelles Excluded:"];
fitCellSizeFromOrganelles[washed];
```

All Experiments, Null Organelles Excluded:

a[i]: {3.47326, 0.792393, 0.104546, 0.562079, 0.0179463, −0.271061}

b[i,j]:

b$18326[1, 1]	−0.00344124	0.00166971	−0.0437249	−0.0895908	0.0518534
b$18326[2, 1]	b$18326[2, 2]	−0.0000710892	−0.00129985	−0.00407788	0.00118305
b$18326[3, 1]	b$18326[3, 2]	b$18326[3, 3]	0.000231988	0.00136929	−0.00131995
b$18326[4, 1]	b$18326[4, 2]	b$18326[4, 3]	b$18326[4, 4]	0.0482466	−0.0140692
b$18326[5, 1]	b$18326[5, 2]	b$18326[5, 3]	b$18326[5, 4]	b$18326[5, 5]	0.0436904
b$18326[6, 1]	b$18326[6, 2]	b$18326[6, 3]	b$18326[6, 4]	b$18326[6, 5]	b$18326[6, 6]

c: 55.6453

alpha[i]: {0.931525, 1.17684, 1.82988, −0.398609, 0.790704, −0.43754}

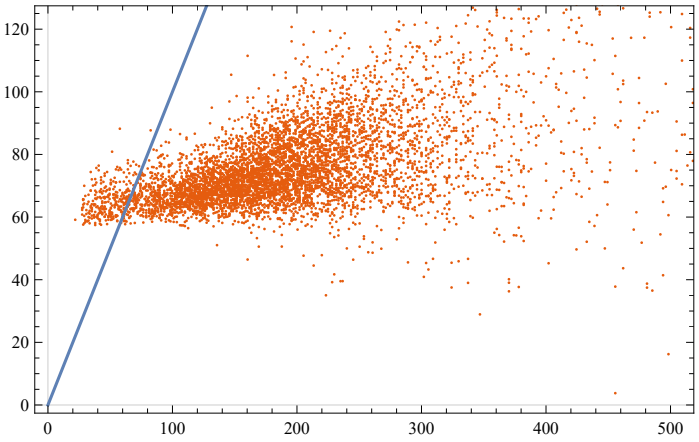
Adjusted R Square: 0.965648

p-values for parameter z-statistics:

{3.76287×10^{-12}, 4.70766×10^{-23}, 0.00253352, 0.00104195, 0.940107, 0.0284828, 0.0000322013, 0.0562048, 0.00455619, 0.000310935, 0.0000200341, 0.0304665, 0.0610444, 1.67549×10^{-6}, 0.0217549, 0.279996, 0.0430571, 0.0169287, 3.23385×10^{-9}, 0.0000999296, 2.98052×10^{-12}, 5.01915×10^{-55}, 1.47512×10^{-81}, 0., 8.18483×10^{-89}, 1.20591×10^{-12}, 0., 9.16478×10^{-11}}

t-statistics for parameter estimates:

{6.95966, 9.92729, 3.02054, 3.28051, 0.0751381, −2.19108, −4.16039, 1.9098, −2.83788, −3.60806, 4.26782, −2.16447, −1.87352, −4.79371, 2.2952, 1.08042, 2.02357, −2.3889, 5.9279, −3.8933, 6.99268, 15.7798, 19.4152, 54.8, 20.3078, −7.1195, 85.7453, −6.4914}



In[53]:=
```
Do[
  Print[experiments[[i]], ", Null Organelles filled with 0:"];
  fitCellSizeFromOrganelles[Select[filled, #[[1]] == experiments[[i]] &]];,
  {i, 1, Length[experiments]}
 ];
```

EYrainbow_glucose, Null Organelles filled with 0:

a[i]: {2.25529, 0.0415654, 0.393512, −5.22931, 6.00122, 0.970455}

b[i,j]:

b$18808[1, 1]	−0.00396857	−0.014997	−0.245722	0.131322	0.922111
b$18808[2, 1]	b$18808[2, 2]	0.0000406576	0.000773604	0.000685802	−0.00202324
b$18808[3, 1]	b$18808[3, 2]	b$18808[3, 3]	0.016604	−0.00552205	0.0132314
b$18808[4, 1]	b$18808[4, 2]	b$18808[4, 3]	b$18808[4, 4]	0.140637	−0.815431
b$18808[5, 1]	b$18808[5, 2]	b$18808[5, 3]	b$18808[5, 4]	b$18808[5, 5]	−0.191087
b$18808[6, 1]	b$18808[6, 2]	b$18808[6, 3]	b$18808[6, 4]	b$18808[6, 5]	b$18808[6, 6]

c: −7.36138

alpha[i]: {0.915646, 1.63196, 1.65024, 0.800632, 0.690578, 0.115422}

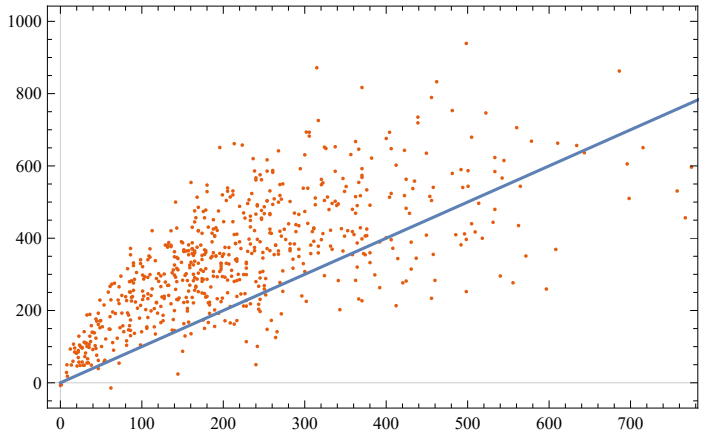
Adjusted R Square: 0.961505

p-values for parameter z-statistics:

{0.525251, 0.170518, 0.384643, 0.0260467, 1.65172×10^{-7}, 0.609262, 0.184777,
0.508321, 0.495629, 0.432715, 0.00248992, 0.558943, 0.388332, 0.318838, 0.276338,
0.555074, 0.403348, 0.52787, 0.265221, 0.00324127, 0.0905573, 0.559554,
1.21134×10^{-18}, 1.58984×10^{-26}, 1.44999×10^{-6}, 4.62819×10^{-7}, 3.85538×10^{-54}, 0.50831}

t-statistics for parameter estimates:

{0.635626, 1.3721, 0.869977, −2.23077, 5.29418, 0.511383, −1.32764, −0.661831, −0.681778,
0.785056, 3.03675, 0.584722, 0.863241, 0.997635, −1.08953, 0.590488, −0.836218, 0.631611,
1.11513, −2.95518, −1.69506, −0.583814, 9.09533, 11.1608, 4.86454, 5.09427, 17.0955, 0.661848}



EYrainbow_glucose_largerBF, Null Organelles filled with 0:

a[i]: {−6.08493, 0.0232464, 1.03449×10^{-10}, 7.13259, 11.0575, −0.43553}

b[i,j]:

b$18946[1, 1]	0.000026469	-5.48978×10^{-11}	0.451918	0.317352	0.192775
b$18946[2, 1]	b$18946[2, 2]	6.10422×10^{-15}	0.000491931	−0.000522362	0.0000374099
b$18946[3, 1]	b$18946[3, 2]	b$18946[3, 3]	9.41269×10^{-12}	2.92256×10^{-11}	-2.53825×10^{-11}
b$18946[4, 1]	b$18946[4, 2]	b$18946[4, 3]	b$18946[4, 4]	−0.755543	0.424949
b$18946[5, 1]	b$18946[5, 2]	b$18946[5, 3]	b$18946[5, 4]	b$18946[5, 5]	−0.0517878
b$18946[6, 1]	b$18946[6, 2]	b$18946[6, 3]	b$18946[6, 4]	b$18946[6, 5]	b$18946[6, 6]

c: −65.8228

alpha[i]: {0.904679, 2.15835, 6.78344, 1.65885, 0.744653, 0.200769}

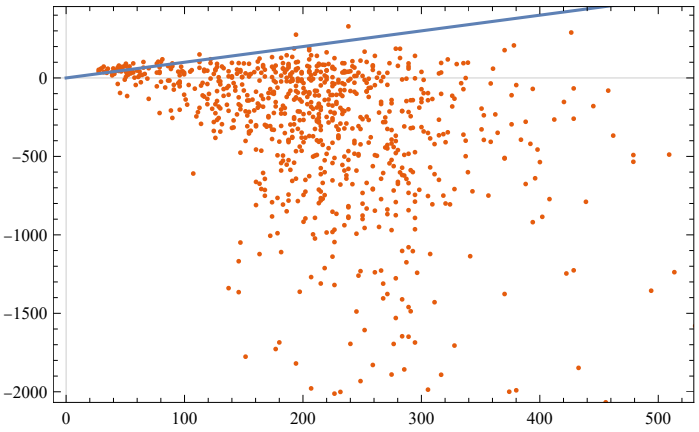
Adjusted R Square: 0.967636

p-values for parameter z-statistics:

{0., 5.25703×10^{-8}, 0.524438, 0., 0., 0., 0.946472, 1.11747×10^{-11}, 0., 2.16431×10^{-49}, 4.23696×10^{-32}, 0.0982894, 0.0967173, 8.21046×10^{-9}, 0.801009, 0.0444237, 1.11815×10^{-29}, 1.93718×10^{-6}, 1.73275×10^{-274}, 2.30032×10^{-200}, 5.62853×10^{-10}, 0., 0., 0., 0., 0., 0., 1.8475×10^{-85}}

t-statistics for parameter estimates:

{-11851.8, 5.4928, 0.636789, 11461.6, 10646.2, -598.677, 0.0671586, -6.88768, 130.061, 15.8017, 12.3068, 1.65506, 1.66286, -5.82381, 0.252122, 2.01312, 11.7667, -4.79387, -54.0326, 40.7231, -6.27465, -1.06438×10^{6}, 792.475, 4084.45, 19066.6, 1748.1, 79.8364, 22.0879}



EYrainbow_rapamycin_1stTry, Null Organelles filled with 0:

a[i]: {8.29789, 0.0769519, 0.057453, -2.43186, -0.171198, 0.973342}

b[i,j]:

b$19100[1, 1]	-0.00478623	0.000648476	-0.89196	-0.007849	-0.108691
b$19100[2, 1]	b$19100[2, 2]	2.57139×10^{-6}	0.000181402	0.0000866572	-0.00170415
b$19100[3, 1]	b$19100[3, 2]	b$19100[3, 3]	0.00122592	-0.0000174606	-0.000326064
b$19100[4, 1]	b$19100[4, 2]	b$19100[4, 3]	b$19100[4, 4]	0.00371506	-0.0365451
b$19100[5, 1]	b$19100[5, 2]	b$19100[5, 3]	b$19100[5, 4]	b$19100[5, 5]	0.00736798
b$19100[6, 1]	b$19100[6, 2]	b$19100[6, 3]	b$19100[6, 4]	b$19100[6, 5]	b$19100[6, 6]

c: 86.542

alpha[i]: {0.458319, 1.80915, 2.08631, 2.81677, 1.88768, 0.074722}

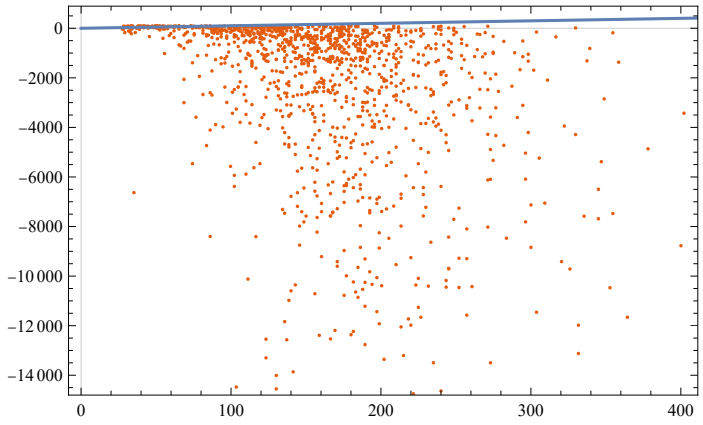
Adjusted R Square: 0.94345

p-values for parameter z-statistics:

{5.12501×10^{-9}, 0.271101, 0.141832, 0.234516, 0.238693, 0.0422478, 0.276795, 0.572469, 0.0631035, 0.361516, 0.251132, 0.61899, 0.961456, 0.357301, 0.266706, 0.474443, 0.492393, 0.310538, 0.683681, 0.795315, 0.224841, 7.79389×10^{-91}, 0.0000185388, 1.35369×10^{-16}, 1.26257×10^{-25}, 0.0000228507, 2.55641×10^{-10}, 0.601904}

t-statistics for parameter estimates:

{5.88438, 1.10102, 1.46993, -1.18938, -1.17882, 2.03315, -1.08802, 0.564568, -1.86012, -0.912815, -1.14814, 0.497407, 0.0483362, 0.920861, -1.11118, 0.715484, -0.68671, -1.01451, 0.40754, -0.259471, 1.21436, 21.9856, 4.29841, 8.38484, 10.6997, 4.25114, 6.37574, 0.521797}



EYrainbow_rapamycin_CheckBistability, Null Organelles filled with 0:

a[i]: {−3.88743, 0.0463887, 0.257874, 3.73558, −1.16468, −1.10043}

b[i,j]:

b$19238[1, 1]	−0.000654589	0.00146986	−0.168344	0.287393	−0.211467
b$19238[2, 1]	b$19238[2, 2]	1.32891×10^{-6}	−0.000209559	−0.000648105	0.0000459076
b$19238[3, 1]	b$19238[3, 2]	b$19238[3, 3]	0.00103063	−0.0011708	−0.00220837
b$19238[4, 1]	b$19238[4, 2]	b$19238[4, 3]	b$19238[4, 4]	−0.216004	0.284433
b$19238[5, 1]	b$19238[5, 2]	b$19238[5, 3]	b$19238[5, 4]	b$19238[5, 5]	0.0690958
b$19238[6, 1]	b$19238[6, 2]	b$19238[6, 3]	b$19238[6, 4]	b$19238[6, 5]	b$19238[6, 6]

c: 70.7118

alpha[i]: {1.26687, 1.98602, 1.82981, −0.111692, 0.926681, 0.560651}

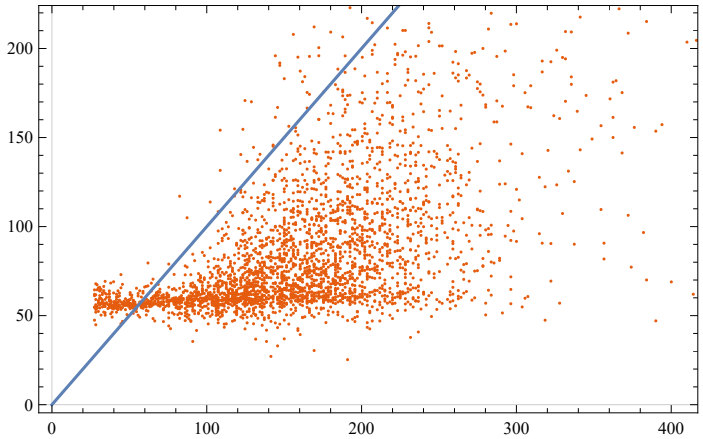
Adjusted R Square: 0.963039

p-values for parameter z-statistics:

{9.28197×10^{-11}, 0.102387, 0.000170661, 0.0000210132, 0.0000161974, 0.0352461, 0.103596, 0.110976, 0.000764313, 1.96326×10^{-13}, 6.57644×10^{-8}, 0.690364, 0.397826, 0.120715, 0.817759, 0.244582, 0.037227, 0.0405829, 0.0000183196, 0.0000109561, 0.0000190092, 6.82205×10^{-76}, 8.79766×10^{-70}, 3.29576×10^{-37}, 3.75683×10^{-134}, 0.356956, 2.75235×10^{-308}, 2.63851×10^{-10}}

t-statistics for parameter estimates:

{−6.50057, 1.63387, 3.76346, 4.26036, −4.31852, −2.10644, −1.62814, 1.59428, −3.36873, 7.38381, −5.41546, 0.398398, −0.845627, −1.5522, 0.230448, 1.16383, −2.08416, −2.04862, −4.2911, 4.40456, 4.28284, 18.9505, 18.1101, 12.9144, 25.9012, −0.921316, 42.1978, 6.33943}



EYrainbow_1nmpp1_1st, Null Organelles filled with 0:

a[i]: {2.73439, 0.213713, 0.154328, −2.74601, 5.23132, −4.66461}

b[i,j]:

b$19376[1, 1]	−0.0026659	−0.00144172	−0.431363	0.235087	−0.494927
b$19376[2, 1]	b$19376[2, 2]	0.0000201859	−0.02989	−0.0048514	−0.00179706
b$19376[3, 1]	b$19376[3, 2]	b$19376[3, 3]	0.0100175	−0.00222036	0.00464416
b$19376[4, 1]	b$19376[4, 2]	b$19376[4, 3]	b$19376[4, 4]	−0.285396	1.13894
b$19376[5, 1]	b$19376[5, 2]	b$19376[5, 3]	b$19376[5, 4]	b$19376[5, 5]	0.0680297
b$19376[6, 1]	b$19376[6, 2]	b$19376[6, 3]	b$19376[6, 4]	b$19376[6, 5]	b$19376[6, 6]

c: 7.89439

alpha[i]: {0.918863, 1.63278, 1.82884, 2.71568, 0.660611, 1.0918}

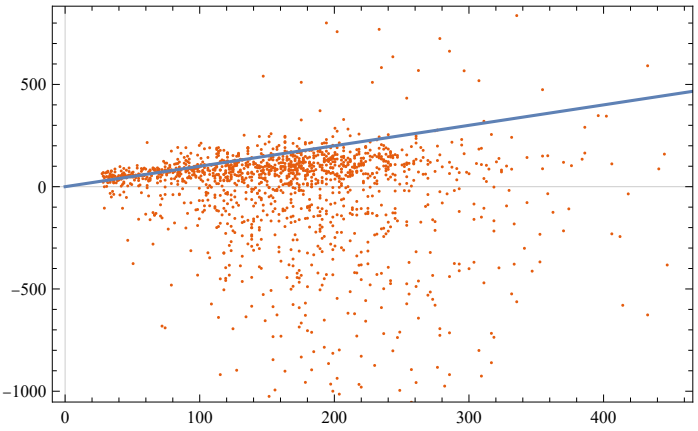
Adjusted R Square: 0.962047

p-values for parameter z-statistics:

{0.110225, 0.0593623, 0.0775009, 0.505956, 1.12179×10^{-19}, 0.00653699, 0.203375,
0.303991, 0.415144, 0.0124226, 0.00850862, 0.359756, 0.173253, 0.110285, 0.285362,
0.188547, 0.0877148, 0.220085, 0.33663, 0.0267669, 0.509127, 0.26919, 8.71351×10^{-16},
2.05373×10^{-34}, 1.37081×10^{-31}, 6.79409×10^{-11}, 9.36774×10^{-141}, 0.0000936003}

t-statistics for parameter estimates:

{1.59806, 1.88683, 1.7665, −0.665296, 9.19511, −2.7231, −1.27251, −1.02824, −0.815085,
2.50272, −2.63443, 0.916091, −1.36243, −1.59779, −1.06871, 1.31545, −1.70862, 1.22678,
−0.961132, 2.21693, 0.660345, 1.10531, 8.12642, 12.5252, 11.9482, 6.56949, 27.9803, 3.91648}



EYrainbow_leucine_large, Null Organelles filled with 0:

a[i]: {0.746557, 0.020011, 0.963743, 0.32088, −1.23276, 0.195301}

b[i,j]:

b$19514[1, 1]	0.0000257428	0.00158772	0.0180724	−0.0326575	−0.0221794
b$19514[2, 1]	b$19514[2, 2]	1.87371×10^{-6}	0.0000370207	−0.000800724	0.000282576
b$19514[3, 1]	b$19514[3, 2]	b$19514[3, 3]	−0.00440537	0.00918238	−0.00416238
b$19514[4, 1]	b$19514[4, 2]	b$19514[4, 3]	b$19514[4, 4]	−0.0125332	0.0225078
b$19514[5, 1]	b$19514[5, 2]	b$19514[5, 3]	b$19514[5, 4]	b$19514[5, 5]	0.0207728
b$19514[6, 1]	b$19514[6, 2]	b$19514[6, 3]	b$19514[6, 4]	b$19514[6, 5]	b$19514[6, 6]

c: 22.1809

alpha[i]: {1.42703, 1.88932, 1.42079, −1.07062, 0.712871, −0.376682}

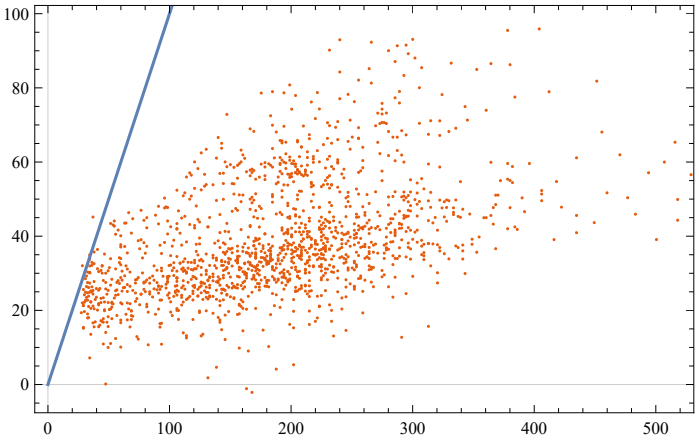
Adjusted R Square: 0.980123

p-values for parameter z-statistics:

{0.23263, 0.346508, 0.00483476, 0.0964298, 0.0130564, 0.397661, 0.892151,
0.625939, 0.360232, 0.380176, 0.292725, 0.890888, 0.739384, 0.409818, 0.429563,
0.0312213, 0.0888892, 0.0576414, 0.484819, 0.0230917, 0.00662439, 0.0000336982,
4.98552×10^{-6}, 2.08127×10^{-13}, 9.18853×10^{-49}, 0., 2.98535×10^{-35}, 0.0309894}

t-statistics for parameter estimates:

{1.1941, 0.941686, 2.82211, 1.66347, −2.48524, 0.846052, 0.135607, 0.487553, 0.915209,
−0.877835, −1.05254, 0.137204, 0.332732, −0.824449, 0.790158, −2.1563, 1.70241, −1.8999,
−0.698749, 2.27429, 2.71901, 4.15972, 4.58233, 7.41228, 15.2304, −151.527, 12.7205, −2.15927}



EYrainbowWhi5Up_betaEstrodiol, Null Organelles filled with 0:

a[i]: {2.0793, 0.52773, 0.0446242, 1.649, 5.41932, −3.51815}

b[i,j]:

b$19652[1, 1]	−0.00301458	−0.00198516	−0.0488296	0.552687	−0.265232
b$19652[2, 1]	b$19652[2, 2]	0.0000109739	0.000964784	−0.00997489	0.00100441
b$19652[3, 1]	b$19652[3, 2]	b$19652[3, 3]	0.000530961	−0.00140965	0.00258127
b$19652[4, 1]	b$19652[4, 2]	b$19652[4, 3]	b$19652[4, 4]	−0.054373	−0.154225
b$19652[5, 1]	b$19652[5, 2]	b$19652[5, 3]	b$19652[5, 4]	b$19652[5, 5]	0.114994
b$19652[6, 1]	b$19652[6, 2]	b$19652[6, 3]	b$19652[6, 4]	b$19652[6, 5]	b$19652[6, 6]

c: −6.16198

alpha[i]: {1.1693, 1.28197, 2.10701, −0.931655, 0.719818, 1.1015}

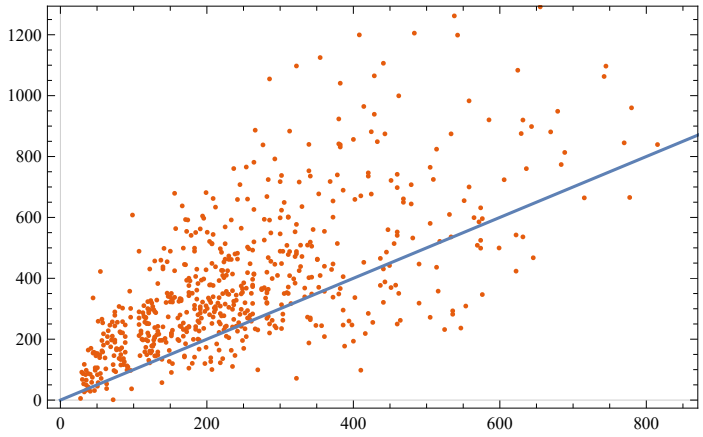
Adjusted R Square: 0.975453

p-values for parameter z-statistics:

{0.23304, 0.00128631, 0.361611, 0.0233616, 0.00112365, 0.237336, 0.03796, 0.415906,
0.174291, 0.0000120084, 0.107049, 0.454678, 0.208678, 0.0045007, 0.759962,
0.444468, 0.374011, 0.412249, 0.15758, 0.0229573, 0.560731, 0.71841, 1.42168×10^{-43},
1.32915×10^{-70}, 8.48544×10^{-13}, 0.0000535896, 3.50052×10^{-137}, 4.48283×10^{-7}}

t-statistics for parameter estimates:

{1.19372, 3.23375, 0.91297, 2.27307, 3.27283, −1.18281, −2.07972, −0.814087, −1.3601, 4.4131,
−1.61393, 0.748107, 1.25851, −2.85113, 0.305665, 0.765157, −0.889625, 0.820493, −1.41496,
−2.27979, 0.582068, −0.360748, 14.9845, 20.2807, 7.30552, −4.06764, 32.6757, 5.10134}



In[54]:=
```
Do[
 Print[experiments[[i]], ", Null Organelles Excluded:"];
 fitCellSizeFromOrganelles[Select[washed, #[[1]] == experiments[[i]] &]];,
 {i, 1, Length[experiments]}
]
```

EYrainbow_glucose, Null Organelles Excluded:

a[i]: {1.93135, 0.159665, 0.351302, −1.69587, 4.75228, 5.22071}

b[i,j]:

b$20119[1, 1]	−0.0130452	−0.0239446	−0.233265	0.137003	1.36801
b$20119[2, 1]	b$20119[2, 2]	0.000112627	0.00217108	0.00253537	−0.00780164
b$20119[3, 1]	b$20119[3, 2]	b$20119[3, 3]	0.0262174	−0.00267348	0.0242738
b$20119[4, 1]	b$20119[4, 2]	b$20119[4, 3]	b$20119[4, 4]	0.0846012	−1.35488
b$20119[5, 1]	b$20119[5, 2]	b$20119[5, 3]	b$20119[5, 4]	b$20119[5, 5]	−0.369588
b$20119[6, 1]	b$20119[6, 2]	b$20119[6, 3]	b$20119[6, 4]	b$20119[6, 5]	b$20119[6, 6]

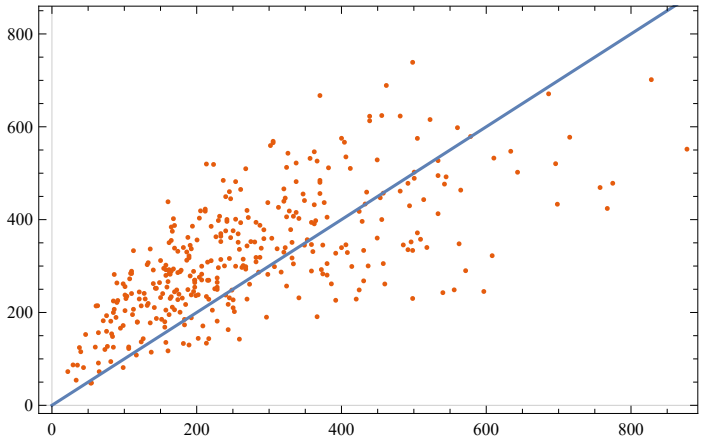
c: −10.7139

alpha[i]: {0.836263, 1.40684, 1.60043, 0.752815, 0.695855, 0.235989}

Adjusted R Square: 0.969315

p-values for parameter z-statistics:
{0.729843, 0.137163, 0.504929, 0.681077, 0.0114856, 0.154369, 0.150372, 0.645717,
 0.617595, 0.526987, 0.00623393, 0.690053, 0.455801, 0.311859, 0.251025, 0.680878,
 0.629241, 0.675404, 0.63067, 0.00444472, 0.0606431, 0.692885, 2.38531×10^{-14},
 4.51661×10^{-22}, 0.00176363, 0.000121636, 6.62415×10^{-23}, 0.231873}

t-statistics for parameter estimates:
{0.345616, 1.48992, 0.667458, −0.411344, 2.54125, 1.42742, −1.44144, −0.460127, −0.499717,
 0.633258, 2.75222, 0.39912, 0.746626, 1.01282, −1.14981, 0.411616, −0.48323, 0.419101,
 0.481215, −2.86371, −1.88229, −0.395276, 7.96939, 10.3626, 3.15215, 3.88742, 10.6023, 1.19767}



EYrainbow_glucose_largerBF, Null Organelles Excluded:

a[i]: $\{-15.667, 1.15408, 8.97129\times10^{-11}, 9.35004, 9.11458, 0.630652\}$

b[i,j]:

$$\begin{pmatrix} b\$20256[1,1] & -0.0466238 & -9.49998\times10^{-11} & 0.877159 & 1.05713 & -0.15433 \\ b\$20256[2,1] & b\$20256[2,2] & -6.48053\times10^{-13} & 0.0107775 & -0.0164349 & 0.00391832 \\ b\$20256[3,1] & b\$20256[3,2] & b\$20256[3,3] & -1.81347\times10^{-11} & 2.84314\times10^{-11} & -1.53034\times10^{-12} \\ b\$20256[4,1] & b\$20256[4,2] & b\$20256[4,3] & b\$20256[4,4] & -0.633487 & 0.0557303 \\ b\$20256[5,1] & b\$20256[5,2] & b\$20256[5,3] & b\$20256[5,4] & b\$20256[5,5] & -0.0218523 \\ b\$20256[6,1] & b\$20256[6,2] & b\$20256[6,3] & b\$20256[6,4] & b\$20256[6,5] & b\$20256[6,6] \end{pmatrix}$$

c: -63.7285

alpha[i]: {0.826969, 1.15186, 6.73529, 1.28274, 0.741676, -0.528911}

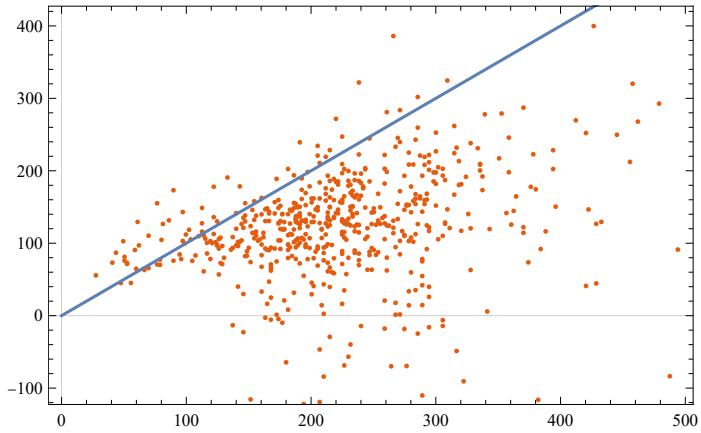
Adjusted R Square: 0.974121

p-values for parameter z-statistics:

$\{0., 0.0883728, 0.751985, 0., 1.01741\times10^{-36}, 0.214965, 0.274788, 0.806158,$
$0.0382295, 8.06022\times10^{-9}, 0.259568, 0.79194, 0.606887, 0.0862753, 0.419061, 0.794927,$
$0.806401, 0.80487, 1.09585\times10^{-12}, 0.249909, 0.154037, 0., 6.89923\times10^{-18},$
$1.25895\times10^{-11}, 5.04408\times10^{-11}, 1.13202\times10^{-8}, 1.90021\times10^{-181}, 0.10554\}$

t-statistics for parameter estimates:

{-393.992, 1.70701, 0.316178, 168.201, 13.6223, 1.24143, -1.09317, -0.245501, 2.07728, 5.85625,
-1.12855, -0.263918, 0.514812, -1.71839, 0.808646, -0.260041, 0.245188, -0.247166, -7.28474,
1.15176, -1.42734, -2122.21, 8.91332, 6.91707, 6.70088, 5.79611, 43.3645, -1.62118}



EYrainbow_rapamycin_1stTry, Null Organelles Excluded:

a[i]: {8.28135, 0.614946, 0.00167816, 1.70492, −0.0811318, 1.06387}

b[i,j]:

$$\begin{pmatrix} b\$20410[1,1] & -0.0349098 & -1.51607\times10^{-6} & 0.00321738 & -0.0184725 & -0.0458883 \\ b\$20410[2,1] & b\$20410[2,2] & -9.51933\times10^{-8} & 0.00133641 & 0.000409029 & -0.0125984 \\ b\$20410[3,1] & b\$20410[3,2] & b\$20410[3,3] & -9.55391\times10^{-7} & 7.02246\times10^{-7} & -4.09429\times10^{-6} \\ b\$20410[4,1] & b\$20410[4,2] & b\$20410[4,3] & b\$20410[4,4] & -0.00394728 & -0.0450096 \\ b\$20410[5,1] & b\$20410[5,2] & b\$20410[5,3] & b\$20410[5,4] & b\$20410[5,5] & 0.00895891 \\ b\$20410[6,1] & b\$20410[6,2] & b\$20410[6,3] & b\$20410[6,4] & b\$20410[6,5] & b\$20410[6,6] \end{pmatrix}$$

c: 70.7369

alpha[i]: {0.42106, 1.36567, 2.92489, −0.347826, 1.95343, 0.186102}

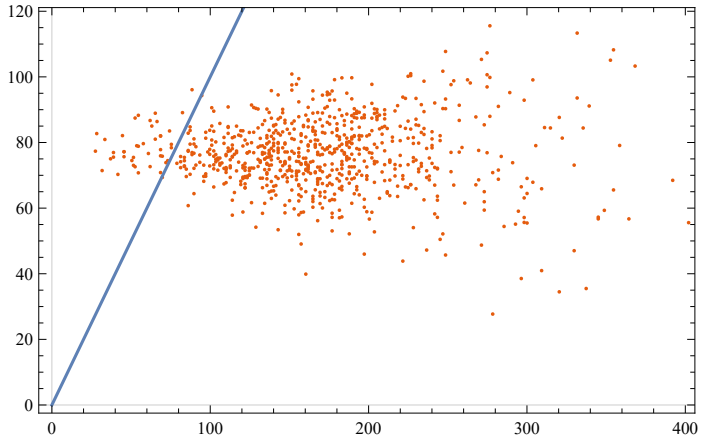
Adjusted R Square: 0.956914

p-values for parameter z-statistics:

{0.000173804, 0.0600371, 0.414056, 0.0160399, 0.277903, 0.153807, 0.0920468,
0.961171, 0.969692, 0.22449, 0.657287, 0.854205, 0.632694, 0.332812, 0.0954971,
0.920297, 0.648063, 0.750655, 0.290181, 0.205742, 0.222141, 1.38788×10^{-17},
0.000566683, 1.36862×10^{-22}, 5.53591×10^{-16}, 0.132589, 1.77222×10^{-10}, 0.273493}

t-statistics for parameter estimates:

{3.77284, 1.8833, 0.81722, 2.41334, −1.08581, 1.42762, −1.6868, −0.0486996, 0.0380069,
−1.21565, −0.443834, −0.183818, 0.478129, 0.969076, −1.66914, −0.100092, 0.456634, −0.31789,
−1.05845, −1.26643, 1.22184, 8.74535, 3.46157, 10.0959, 8.27773, −1.50557, 6.46739, 1.09584}



EYrainbow_rapamycin_CheckBistability, Null Organelles Excluded:

a[i]: {0.325983, 0.785927, 0.0122304, 5.97288, 1.75468, −0.00410787}

b[i,j]:

b$20548[1, 1]	−0.0097669	−0.0000620316	−0.341833	0.188242	0.00137667
b$20548[2, 1]	b$20548[2, 2]	-8.07812×10^{-6}	0.00383502	−0.0108679	−0.000119375
b$20548[3, 1]	b$20548[3, 2]	b$20548[3, 3]	0.000198508	−0.000101644	2.14408×10^{-6}
b$20548[4, 1]	b$20548[4, 2]	b$20548[4, 3]	b$20548[4, 4]	−0.170171	−0.00797156
b$20548[5, 1]	b$20548[5, 2]	b$20548[5, 3]	b$20548[5, 4]	b$20548[5, 5]	0.00125782
b$20548[6, 1]	b$20548[6, 2]	b$20548[6, 3]	b$20548[6, 4]	b$20548[6, 5]	b$20548[6, 6]

c: 32.5514

alpha[i]: {1.0461, 1.29376, 2.53252, 0.34711, 0.704197, −2.01266}

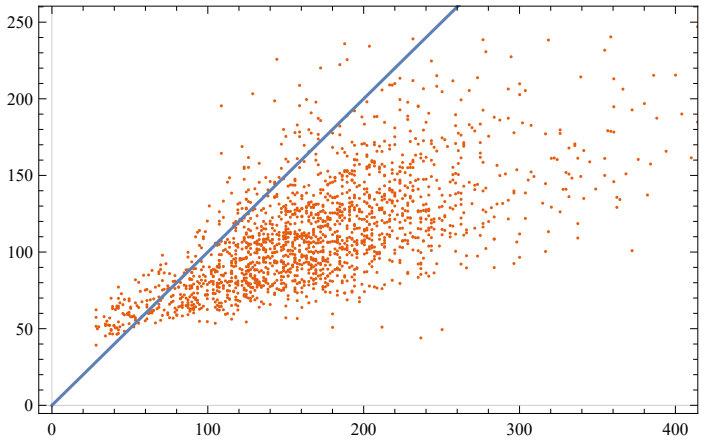
Adjusted R Square: 0.981487

p-values for parameter z-statistics:

{0.658657, 0.00163728, 0.0260901, 0.00264742, 4.22017×10^{-6}, 0.727303, 0.023179,
0.0990296, 0.00271836, 5.98082×10^{-6}, 0.329244, 0.0711799, 0.548815, 0.0174701,
0.297429, 0.184279, 0.0465658, 0.317276, 0.0654213, 0.216901, 0.276624, 1.84393×10^{-9},
6.40148×10^{-48}, 1.25456×10^{-49}, 2.1414×10^{-85}, 0.0455774, 5.84722×10^{-130}, 6.89254×10^{-8}}

t-statistics for parameter estimates:

{0.44184, 3.15392, 2.22669, 3.01012, 4.61431, −0.348769, −2.2724, −1.65042, −3.00204, 4.5405,
0.9759, −1.80539, 0.599648, −2.37884, −1.04226, 1.3282, −1.99159, 1.00035, −1.84348,
−1.23524, 1.08826, 6.04185, 14.9798, 15.2713, 20.6674, 2.00066, 26.3629, −5.41638}



EYrainbow_1nmpp1_1st, Null Organelles Excluded:

a[i]: {3.23557, 0.849113, 0.118385, 1.858, 5.40375, 0.939394}

b[i,j]:

b$20686[1, 1]	−0.0160349	−0.000552406	0.0710163	−0.236897	0.0456767
b$20686[2, 1]	b$20686[2, 2]	−0.000021895	0.00870731	−0.0248736	−0.00218286
b$20686[3, 1]	b$20686[3, 2]	b$20686[3, 3]	−0.0017205	0.00553555	−0.0013083
b$20686[4, 1]	b$20686[4, 2]	b$20686[4, 3]	b$20686[4, 4]	−0.53927	0.194084
b$20686[5, 1]	b$20686[5, 2]	b$20686[5, 3]	b$20686[5, 4]	b$20686[5, 5]	−0.0965666
b$20686[6, 1]	b$20686[6, 2]	b$20686[6, 3]	b$20686[6, 4]	b$20686[6, 5]	b$20686[6, 6]

c: 18.9915

alpha[i]: {1.16461, 1.28294, 1.89421, 0.321299, 0.176525, −0.338914}

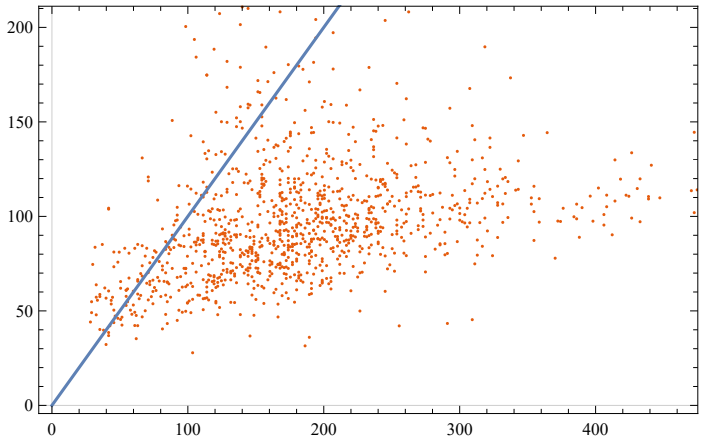
Adjusted R Square: 0.972959

p-values for parameter z-statistics:

{0.0349517, 0.00752647, 0.01786, 0.222173, 6.99877×10^{-8}, 0.0235076, 0.0544702,
0.526807, 0.669128, 0.133794, 0.365929, 0.61408, 0.340337, 0.0439857, 0.345563,
0.0945998, 0.0954353, 0.0620977, 0.0049636, 0.0125905, 0.0537362, 0.020628,
3.01854×10^{-10}, 2.6837×10^{-37}, 5.62288×10^{-52}, 0.0406864, 0.0297826, 0.0119854}

t-statistics for parameter estimates:

{2.11147, 2.67744, 2.37198, 1.22145, 5.42733, 2.26816, −1.92508, −0.633083, 0.427457,
−1.50039, 0.90449, −0.504398, 0.953903, −2.01649, −0.943625, −1.67302, 1.6688, −1.86745,
−2.81493, 2.49915, −1.93098, 2.31799, 6.35502, 13.2396, 15.981, 2.04907, 2.17573, −2.51665}



EYrainbow_leucine_large, Null Organelles Excluded:

a[i]: {0.777192, 0.0318817, 0.226725, 0.607523, −1.00337, 0.31197}

b[i,j]:

b$20824[1, 1]	0.000127634	−0.00117717	0.0219051	0.0171654	−0.0314166
b$20824[2, 1]	b$20824[2, 2]	5.57288×10^{-6}	0.000196753	−0.00137449	0.000432415
b$20824[3, 1]	b$20824[3, 2]	b$20824[3, 3]	−0.000655504	0.00202136	−0.00189286
b$20824[4, 1]	b$20824[4, 2]	b$20824[4, 3]	b$20824[4, 4]	−0.0636071	0.0520663
b$20824[5, 1]	b$20824[5, 2]	b$20824[5, 3]	b$20824[5, 4]	b$20824[5, 5]	0.0394507
b$20824[6, 1]	b$20824[6, 2]	b$20824[6, 3]	b$20824[6, 4]	b$20824[6, 5]	b$20824[6, 6]

c: 44.3594

alpha[i]: {1.60417, 1.85493, 1.77053, −0.932996, 0.715618, −0.102071}

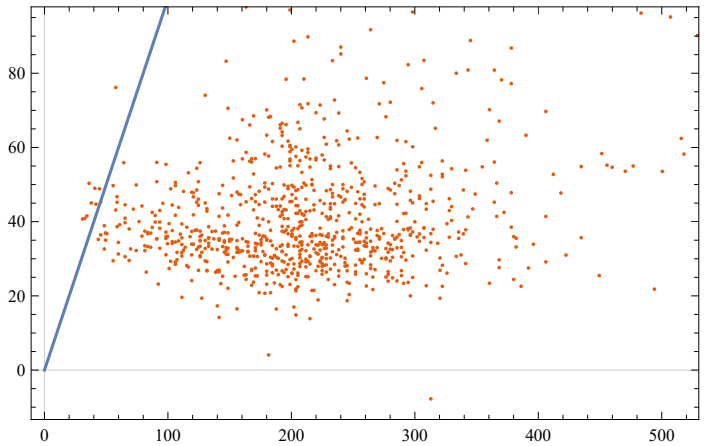
Adjusted R Square: 0.982471

p-values for parameter z-statistics:

{0.232151, 0.398139, 0.0959875, 0.121334, 0.157551, 0.483994, 0.660932, 0.217989,
0.390707, 0.717944, 0.351782, 0.552662, 0.503447, 0.435585, 0.47282, 0.20719,
0.270336, 0.204056, 0.0499161, 0.0219462, 0.00725163, 6.8126×10^{-8}, 0.000648626,
2.41464×10^{-11}, 2.98783×10^{-28}, 6.69594×10^{-9}, 2.51633×10^{-23}, 0.535732}

t-statistics for parameter estimates:

{1.19571, 0.845385, 1.66652, 1.55078, −1.41463, 0.700207, 0.438784, −1.23283, 0.858784,
0.361331, −0.931662, 0.594018, 0.669367, −0.780048, 0.718226, −1.26231, 1.10303, −1.27108,
−1.96354, 2.29561, 2.69171, 5.44532, 3.42343, 6.77117, 11.4412, −5.85932, 10.2573, −0.619538}



EYrainbowWhi5Up_betaEstrodiol, Null Organelles Excluded:

a[i]: {2.40433, 0.9224, 0.0576991, 0.476838, 6.38869, −0.856003}

b[i,j]:

b$20962[1, 1]	−0.00383034	−0.00100755	−0.0262965	0.331118	−0.461807
b$20962[2, 1]	b$20962[2, 2]	−0.0000170171	0.000825206	−0.0142203	0.0126447
b$20962[3, 1]	b$20962[3, 2]	b$20962[3, 3]	0.0000933878	−0.00163663	0.00530803
b$20962[4, 1]	b$20962[4, 2]	b$20962[4, 3]	b$20962[4, 4]	0.00936231	−0.0761732
b$20962[5, 1]	b$20962[5, 2]	b$20962[5, 3]	b$20962[5, 4]	b$20962[5, 5]	−0.148977
b$20962[6, 1]	b$20962[6, 2]	b$20962[6, 3]	b$20962[6, 4]	b$20962[6, 5]	b$20962[6, 6]

c: −16.2983

alpha[i]: {1.24274, 1.16573, 2.01106, −1.31614, 0.739185, 1.51277}

Adjusted R Square: 0.98048

p-values for parameter z-statistics:

{0.12729, 0.000488108, 0.407584, 0.178052, 0.00002749, 0.801776, 0.0445394,
0.512616, 0.196854, 0.00445551, 0.00646288, 0.603328, 0.304177, 0.0107285, 0.110147,
0.604034, 0.405534, 0.485661, 0.618303, 0.102119, 0.501786, 0.31834, 1.04314×10^{-32},
1.48718×10^{-67}, 2.4175×10^{-9}, 0.0000124992, 4.82192×10^{-127}, 1.06297×10^{-7}}

t-statistics for parameter estimates:

{1.52711, 3.50747, 0.828767, 1.34845, 4.22781, −0.251166, −2.01343, −0.655181, −1.29208, 2.85537,
−2.73343, −0.519911, 1.02845, −2.55986, 1.60003, 0.518898, −0.832398, 0.697683, 0.49853,
−1.63731, −0.672111, −0.99875, 12.6991, 19.9537, 6.06424, −4.40755, 31.5452, 5.38471}