

In[270]:=

```
useSwitchA = True; (* Change this to change from low-
hystereis switch (A) to high-hysteresis swith (B). False means switch B *)
```

```
NormFactor = 70;
foldChange = .
h = 4;
hR = 1;
s = If[useSwitchA, 1.3, 2.0]; (* 1.3 or 2.0 *)
kdeg = 0.07; (* was 0.07 *)
VmE = 15 / NormFactor;
KmE = 70 / NormFactor;
KdT = 50 / NormFactor;
VmT = 15 / NormFactor; (* switch to >15 to make foldChange=1 favor TFGb3 *)
KmT = 70 / NormFactor; (* switch to 90 to make foldChange=1 favor TGFb3 *)
KdE = 50 / NormFactor;
RE = Round[(4^(1/h)) * KmE * NormFactor * s, 10] * foldChange / NormFactor
RT = Round[(4^(1/h)) * KmT * NormFactor * s * If[useSwitchA, 1.2, 1.0], 10] / NormFactor
(* 1.0 or 1.2 *)
```

Out[278]=
$$\frac{13 \text{ foldChange}}{7}$$

Out[279]=
$$\frac{15}{7}$$

```
In[280]:= vEform = VmE * (KmE^h) / (KmE^h + ((RT / (1 + KdT / TGF))^h))
vTform = VmT * (KmT^h) / (KmT^h + ((RE / (1 + KdE / EGF))^h))
vEdeg = kdeg * EGF
vTdeg = kdeg * TGF
```

Out[280]=
$$\frac{3}{14 \left(1 + \frac{50625}{2401 \left(1 + \frac{5}{7 \text{TGF}} \right)^4} \right)}$$

Out[281]=
$$\frac{3}{14 \left(1 + \frac{28561 \text{ foldChange}^4}{2401 \left(1 + \frac{5}{7 \text{EGF}} \right)^4} \right)}$$

Out[282]= 0.07 EGF

Out[283]= 0.07 TGF

```
In[284]:= NSolve[{vEform == vEdeg, (vTform /. foldChange -> 0.8) == vTdeg},
{EGF, TGF}, Reals, Method -> "EndomorphismMatrix"]
NSolve[{vEform == vEdeg, (vTform /. foldChange -> 0.8) == vTdeg}, {EGF, TGF}, Reals]
```

Out[284]= {{EGF -> 0.311321, TGF -> 2.93962}}

Out[285]= {}

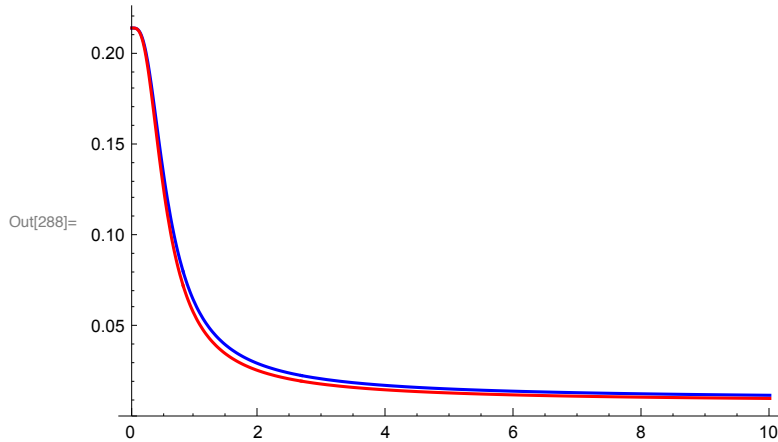
```

In[286]:= testValue = 1.2
Limit[vTform /. foldChange → testValue, EGF → Infinity]
Show[
  Plot[vEform /. foldChange → testValue,
    {TGF, 0, 10}, PlotRange → {All, {0, All}}, PlotStyle → Blue],
  Plot[vTform /. foldChange → testValue, {EGF, 0, 10},
    PlotRange → {All, {0, All}}, PlotStyle → Red]]

```

Out[286]= 1.2

Out[287]= 0.00834887



```

In[289]:= testFC = 0.8
NSolve[{vEform == vEdeg, (vTform /. foldChange → testFC) == vTdeg},
  {EGF, TGF}, Reals, Method → "EndomorphismMatrix"]

```

Out[289]= 0.8

Out[290]= {{EGF → 0.311321, TGF → 2.93962}}

```

In[291]:= steadyStateSolutionsAsReplacements =
  Table[{foldChange, NSolve[{vEform == vEdeg, vTform == vTdeg}, {EGF, TGF},
    Reals, Method → "EndomorphismMatrix"]], {foldChange, 0.25, 2.0, 0.01}}

```

Out[291]= {{0.25, {{EGF → 0.302784, TGF → 3.06011}}}, {0.26, {{EGF → 0.302797, TGF → 3.05992}}}, {0.27, {{EGF → 0.302811, TGF → 3.0597}}}, {0.28, {{EGF → 0.302827, TGF → 3.05947}}}, {0.29, {{EGF → 0.302845, TGF → 3.0592}}}, {0.3, {{EGF → 0.302865, TGF → 3.05891}}}, {0.31, {{EGF → 0.302887, TGF → 3.05858}}}, {0.32, {{EGF → 0.302911, TGF → 3.05822}}}, {0.33, {{EGF → 0.302938, TGF → 3.05783}}}, {0.34, {{EGF → 0.302967, TGF → 3.0574}}}, {0.35, {{EGF → 0.302999, TGF → 3.05693}}}, {0.36, {{EGF → 0.303033, TGF → 3.05642}}}, {0.37, {{EGF → 0.303071, TGF → 3.05586}}}, {0.38, {{EGF → 0.303112, TGF → 3.05525}}}, {0.39, {{EGF → 0.303156, TGF → 3.0546}}}, {0.4, {{EGF → 0.303204, TGF → 3.05389}}}, {0.41, {{EGF → 0.303256, TGF → 3.05313}}}, {0.42, {{EGF → 0.303312, TGF → 3.05231}}}, {0.43, {{EGF → 0.303372, TGF → 3.05142}}}, {0.44, {{EGF → 0.303436, TGF → 3.05048}}}, {0.45, {{EGF → 0.303505, TGF → 3.04946}}}, {0.46, {{EGF → 0.303579, TGF → 3.04838}}}, {0.47, {{EGF → 0.303658, TGF → 3.04722}}}, {0.48, {{EGF → 0.303742, TGF → 3.04598}}}, {0.49, {{EGF → 0.303832, TGF → 3.04466}}}, {0.5, {{EGF → 0.303928, TGF → 3.04326}}}, {0.51, {{EGF → 0.30403, TGF → 3.04177}}}, {0.52, {{EGF → 0.304138, TGF → 3.04019}}}, {0.53, {{EGF → 0.304254, TGF → 3.03852}}}, {0.54, {{EGF → 0.304376, TGF → 3.03674}}}, {0.55, {{EGF → 0.304505, TGF → 3.03486}}}, {0.56, {{EGF → 0.304642, TGF → 3.03287}}}, {0.57, {{EGF → 0.304787, TGF → 3.03077}}}, {0.58, {{EGF → 0.30494, TGF → 3.02856}}}, {0.59, {{EGF → 0.305102, TGF → 3.02622}}}, {0.6, {{EGF → 0.305273, TGF → 3.02376}}},

{0.61, {{EGF → 0.305453, TGF → 3.02117}}}, {0.62, {{EGF → 0.305643, TGF → 3.01844}}},
 {0.63, {{EGF → 0.305844, TGF → 3.01557}}}, {0.64, {{EGF → 0.306055, TGF → 3.01256}}},
 {0.65, {{EGF → 0.306277, TGF → 3.00939}}}, {0.66, {{EGF → 0.30651, TGF → 3.00607}}},
 {0.67, {{EGF → 0.306756, TGF → 3.00259}}}, {0.68, {{EGF → 0.307014, TGF → 2.99894}}},
 {0.69, {{EGF → 0.307286, TGF → 2.99511}}}, {0.7, {{EGF → 0.307571, TGF → 2.99111}}},
 {0.71, {{EGF → 0.307871, TGF → 2.98692}}}, {0.72, {{EGF → 0.308185, TGF → 2.98253}}},
 {0.73, {{EGF → 0.308515, TGF → 2.97795}}}, {0.74, {{EGF → 0.308861, TGF → 2.97315}}},
 {0.75, {{EGF → 0.309224, TGF → 2.96815}}}, {0.76, {{EGF → 0.309605, TGF → 2.96292}}},
 {0.77, {{EGF → 0.310004, TGF → 2.95746}}}, {0.78, {{EGF → 0.310423, TGF → 2.95177}}},
 {0.79, {{EGF → 0.310861, TGF → 2.94582}}}, {0.8, {{EGF → 0.311321, TGF → 2.93962}}},
 {0.81, {{EGF → 0.311804, TGF → 2.93316}}}, {0.82, {{EGF → 0.312309, TGF → 2.92642}}},
 {0.83, {{EGF → 0.312839, TGF → 2.91939}}}, {0.84, {{EGF → 0.313394, TGF → 2.91207}}},
 {0.85, {{EGF → 0.313977, TGF → 2.90444}}}, {0.86, {{EGF → 0.314588, TGF → 2.8965}}},
 {0.87, {{EGF → 0.315228, TGF → 2.88822}}}, {0.88, {{EGF → 0.3159, TGF → 2.8796}}},
 {0.89, {{EGF → 0.316605, TGF → 2.87062}}}, {0.9, {{EGF → 0.317345, TGF → 2.86127}}},
 {0.91, {{EGF → 0.318122, TGF → 2.85153}}}, {0.92, {{EGF → 0.318938, TGF → 2.84138}}},
 {0.93, {{EGF → 0.319795, TGF → 2.83082}}}, {0.94, {{EGF → 0.320697, TGF → 2.81981}}},
 {0.95, {{EGF → 0.321646, TGF → 2.80835}}}, {0.96, {{EGF → 0.322644, TGF → 2.7964}}},
 {0.97, {{EGF → 0.323696, TGF → 2.78394}}}, {0.98, {{EGF → 0.324805, TGF → 2.77096}}},
 {0.99, {{EGF → 0.325975, TGF → 2.75742}}}, {1., {{EGF → 0.32721, TGF → 2.74329}}},
 {1.01, {{EGF → 0.328517, TGF → 2.72855}}}, {1.02, {{EGF → 0.3299, TGF → 2.71315}}},
 {1.03, {{EGF → 0.331366, TGF → 2.69705}}}, {1.04, {{EGF → 0.332923, TGF → 2.68022}}},
 {1.05, {{EGF → 0.334578, TGF → 2.66261}}}, {1.06, {{EGF → 0.33634, TGF → 2.64415}}},
 {1.07, {{EGF → 0.338222, TGF → 2.62479}}}, {1.08, {{EGF → 0.340235, TGF → 2.60446}}},
 {1.09, {{EGF → 0.342394, TGF → 2.58308}}}, {1.1, {{EGF → 0.344716, TGF → 2.56056}}},
 {1.11, {{EGF → 0.347223, TGF → 2.53678}}, {EGF → 1.77612, TGF → 0.53973},
 {EGF → 1.51306, TGF → 0.631773}}}, {1.12, {{EGF → 2.04059, TGF → 0.461398},
 {EGF → 0.349939, TGF → 2.51163}, {EGF → 1.27074, TGF → 0.738798}}},
 {1.13, {{EGF → 2.18599, TGF → 0.421694}, {EGF → 0.352895, TGF → 2.48494},
 {EGF → 1.144, TGF → 0.808609}}}, {1.14, {{EGF → 2.29522, TGF → 0.392616},
 {EGF → 0.356128, TGF → 2.45652}, {EGF → 1.05016, TGF → 0.869392}}},
 {1.15, {{EGF → 2.38381, TGF → 0.369153}, {EGF → 0.359688, TGF → 2.42616},
 {EGF → 0.973928, TGF → 0.92639}}}, {1.16, {{EGF → 2.4583, TGF → 0.349286},
 {EGF → 0.363636, TGF → 2.39354}, {EGF → 0.90895, TGF → 0.981913}}},
 {1.17, {{EGF → 2.52223, TGF → 0.331965}, {EGF → 0.368055, TGF → 2.35829},
 {EGF → 0.851821, TGF → 1.03739}}}, {1.18, {{EGF → 2.57784, TGF → 0.316564},
 {EGF → 0.373059, TGF → 2.31989}, {EGF → 0.80041, TGF → 1.09397}}},
 {1.19, {{EGF → 2.62665, TGF → 0.302674}, {EGF → 0.378809, TGF → 2.27761},
 {EGF → 0.753225, TGF → 1.15276}}}, {1.2, {{EGF → 2.66979, TGF → 0.290012},
 {EGF → 0.385554, TGF → 2.2304}, {EGF → 0.709083, TGF → 1.21514}}},
 {1.21, {{EGF → 2.70809, TGF → 0.278372}, {EGF → 0.393697, TGF → 2.17652},
 {EGF → 0.666895, TGF → 1.28302}}}, {1.22, {{EGF → 2.74223, TGF → 0.2676},
 {EGF → 0.403983, TGF → 2.11289}, {EGF → 0.625398, TGF → 1.35963}}},
 {1.23, {{EGF → 2.77277, TGF → 0.257574}, {EGF → 0.418094, TGF → 2.03272},
 {EGF → 0.582503, TGF → 1.45188}}}, {1.24, {{EGF → 2.80013, TGF → 0.248202},
 {EGF → 0.442141, TGF → 1.91213}, {EGF → 0.531779, TGF → 1.58376}}},
 {1.25, {{EGF → 2.82472, TGF → 0.239404}}}, {1.26, {{EGF → 2.84683, TGF → 0.23112}}},
 {1.27, {{EGF → 2.86676, TGF → 0.223295}}}, {1.28, {{EGF → 2.88473, TGF → 0.215887}}},
 {1.29, {{EGF → 2.90096, TGF → 0.208857}}}, {1.3, {{EGF → 2.91563, TGF → 0.202173}}},
 {1.31, {{EGF → 2.9289, TGF → 0.195807}}}, {1.32, {{EGF → 2.94091, TGF → 0.189734}}},
 {1.33, {{EGF → 2.95179, TGF → 0.183933}}}, {1.34, {{EGF → 2.96164, TGF → 0.178385}}},
 {1.35, {{EGF → 2.97058, TGF → 0.173071}}}, {1.36, {{EGF → 2.97869, TGF → 0.167978}}},
 {1.37, {{EGF → 2.98605, TGF → 0.163091}}}, {1.38, {{EGF → 2.99274, TGF → 0.158398}}},
 {1.39, {{EGF → 2.99881, TGF → 0.153888}}}, {1.4, {{EGF → 3.00432, TGF → 0.14955}}},
 {1.41, {{EGF → 3.00933, TGF → 0.145374}}}, {1.42, {{EGF → 3.01389, TGF → 0.141353}}},

```

{1.43, {{EGF → 3.01804, TGF → 0.137478}}}, {1.44, {{EGF → 3.02181, TGF → 0.133742}}},
{1.45, {{EGF → 3.02524, TGF → 0.130137}}}, {1.46, {{EGF → 3.02837, TGF → 0.126659}}},
{1.47, {{EGF → 3.03121, TGF → 0.1233}}}, {1.48, {{EGF → 3.0338, TGF → 0.120055}}},
{1.49, {{EGF → 3.03616, TGF → 0.11692}}}, {1.5, {{EGF → 3.03831, TGF → 0.113889}}},
{1.51, {{EGF → 3.04027, TGF → 0.110958}}}, {1.52, {{EGF → 3.04206, TGF → 0.108122}}},
{1.53, {{EGF → 3.04369, TGF → 0.105378}}}, {1.54, {{EGF → 3.04518, TGF → 0.102721}}},
{1.55, {{EGF → 3.04654, TGF → 0.100149}}}, {1.56, {{EGF → 3.04778, TGF → 0.0976577}}},
{1.57, {{EGF → 3.04891, TGF → 0.095244}}}, {1.58, {{EGF → 3.04994, TGF → 0.0929049}}},
{1.59, {{EGF → 3.05088, TGF → 0.0906375}}},
{1.6, {{EGF → 3.05174, TGF → 0.0884392}}}, {1.61, {{EGF → 3.05253, TGF → 0.0863073}}},
{1.62, {{EGF → 3.05325, TGF → 0.0842394}}},
{1.63, {{EGF → 3.05391, TGF → 0.0822331}}},
{1.64, {{EGF → 3.05451, TGF → 0.0802861}}},
{1.65, {{EGF → 3.05506, TGF → 0.0783964}}},
{1.66, {{EGF → 3.05557, TGF → 0.0765618}}},
{1.67, {{EGF → 3.05603, TGF → 0.0747804}}},
{1.68, {{EGF → 3.05645, TGF → 0.0730504}}}, {1.69, {{EGF → 3.05684, TGF → 0.07137}}},
{1.7, {{EGF → 3.05719, TGF → 0.0697374}}}, {1.71, {{EGF → 3.05751, TGF → 0.068151}}},
{1.72, {{EGF → 3.05781, TGF → 0.0666093}}},
{1.73, {{EGF → 3.05808, TGF → 0.0651106}}},
{1.74, {{EGF → 3.05833, TGF → 0.0636537}}},
{1.75, {{EGF → 3.05856, TGF → 0.0622371}}},
{1.76, {{EGF → 3.05877, TGF → 0.0608594}}},
{1.77, {{EGF → 3.05897, TGF → 0.0595193}}},
{1.78, {{EGF → 3.05914, TGF → 0.0582158}}},
{1.79, {{EGF → 3.05931, TGF → 0.0569475}}},
{1.8, {{EGF → 3.05946, TGF → 0.0557133}}}, {1.81, {{EGF → 3.05959, TGF → 0.0545122}}},
{1.82, {{EGF → 3.05972, TGF → 0.053343}}}, {1.83, {{EGF → 3.05984, TGF → 0.0522048}}},
{1.84, {{EGF → 3.05994, TGF → 0.0510966}}},
{1.85, {{EGF → 3.06004, TGF → 0.0500174}}},
{1.86, {{EGF → 3.06013, TGF → 0.0489664}}},
{1.87, {{EGF → 3.06021, TGF → 0.0479427}}},
{1.88, {{EGF → 3.06029, TGF → 0.0469454}}},
{1.89, {{EGF → 3.06036, TGF → 0.0459737}}},
{1.9, {{EGF → 3.06043, TGF → 0.0450269}}}, {1.91, {{EGF → 3.06049, TGF → 0.0441041}}},
{1.92, {{EGF → 3.06054, TGF → 0.0432047}}},
{1.93, {{EGF → 3.06059, TGF → 0.042328}}}, {1.94, {{EGF → 3.06064, TGF → 0.0414732}}},
{1.95, {{EGF → 3.06068, TGF → 0.0406398}}},
{1.96, {{EGF → 3.06072, TGF → 0.039827}}}, {1.97, {{EGF → 3.06076, TGF → 0.0390344}}},
{1.98, {{EGF → 3.06079, TGF → 0.0382612}}},
{1.99, {{EGF → 3.06082, TGF → 0.037507}}}, {2., {{EGF → 3.06085, TGF → 0.0367712}}}

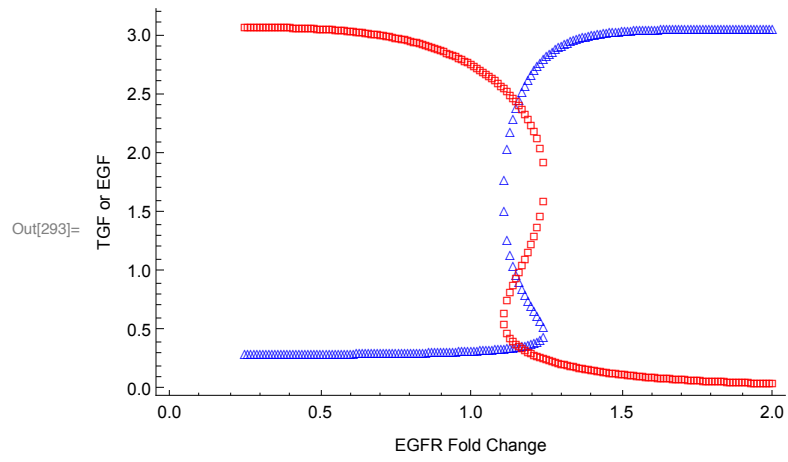
```

```
In[292]:= steadyStateSolutions =
```

```

  Flatten[({#[[1]], EGF, TGF} /. #[[2]]) & /@ steadyStateSolutionsAsReplacements, 1];
ListPlot[{steadyStateSolutions[[All, {1, 2}]], steadyStateSolutions[[All, {1, 3}]]},
  Joined → False, Frame → {{True, False}, {True, False}},
  FrameLabel → {"EGFR Fold Change", "TGF or EGF"},
  PlotMarkers → {"Δ", "□"}, PlotStyle → {Blue, Red}]

```



```

In[294]:= (* Can we reorder solutions so Joined→True will be effective? *)
sSS1 = RandomChoice[steadyStateSolutions]
Nearest[Complement[steadyStateSolutions, {sSS1}], sSS1][[1]]

orderedSteadyStateSolutions = {steadyStateSolutions[[1]]}
Do[
  sSS1 = orderedSteadyStateSolutions[[-1]];
  nextSolution = Nearest[
    Complement[steadyStateSolutions, orderedSteadyStateSolutions], sSS1][[1]];
  AppendTo[orderedSteadyStateSolutions, nextSolution]
  , {i, 2, Length[steadyStateSolutions]}]

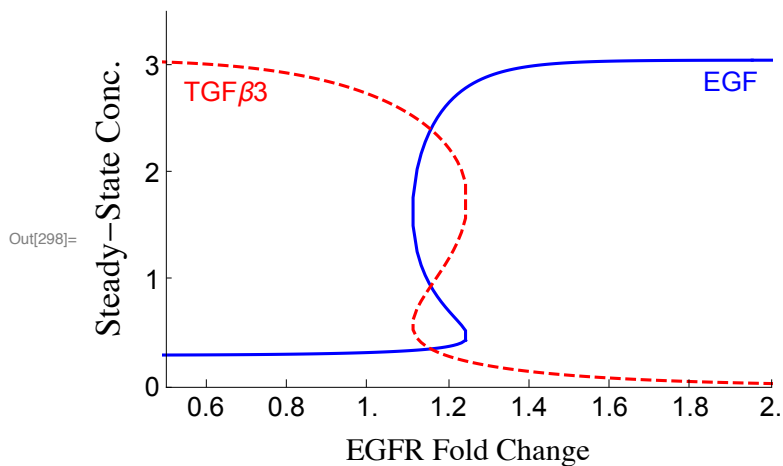
Show[
  ListPlot[{orderedSteadyStateSolutions[[All, {1, 2}]],
    orderedSteadyStateSolutions[[All, {1, 3}]]}, Joined → True,
  Frame → {{True, False}, {True, False}}, FrameLabel →
    {Text[Style["EGFR Fold Change", 16]], Text[Style["Steady-State Conc.", 18]]},
  PlotStyle → {Directive[Blue], Directive[Red, Dashed]},
  PlotRange → {{0.5, 2.0}, {0, 3.5}}, FrameStyle → Directive[14],
  FrameTicks → {{0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0}, {0, 1, 2, 3}},
  Graphics[{
    Text[Style["EGF", Blue, 14], {1.9, 2.85}],
    Text[Style["TGFβ3", Red, 14], {0.65, 2.75}]
  }]]

```

Out[294]= {1.23, 0.582503, 1.45188}

Out[295]= {1.22, 0.625398, 1.35963}

Out[296]= {{0.25, 0.302784, 3.06011}}



```

In[299]:= (* Plot so that unstable solution region is the one that is dashed *)
breakPoints = Flatten[Position[Differences[orderedSteadyStateSolutions[[All, 1]]],
  0.]]
orderedSteadyStateSolutions[[breakPoints[[1]] ;; breakPoints[[1]] + 1]]
orderedSteadyStateSolutions[[breakPoints[[2]] ;; breakPoints[[2]] + 1]]

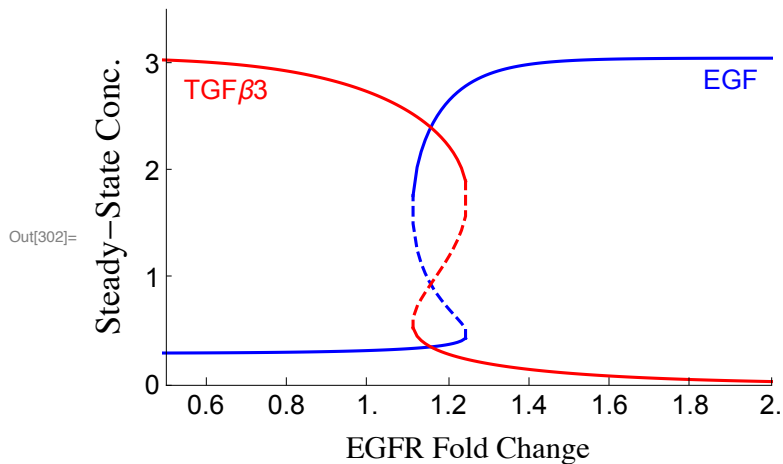
Show[
  ListPlot[
    {orderedSteadyStateSolutions[[ ;; breakPoints[[1]], {1, 2}]],
      orderedSteadyStateSolutions[[breakPoints[[1]] ;; breakPoints[[2]] + 1, {1, 2}]],
      orderedSteadyStateSolutions[[breakPoints[[2]] + 1 ;;, {1, 2}]],
      orderedSteadyStateSolutions[[ ;; breakPoints[[1]], {1, 3}]],
      orderedSteadyStateSolutions[[breakPoints[[1]] ;; breakPoints[[2]] + 1, {1, 3}]],
      orderedSteadyStateSolutions[[breakPoints[[2]] + 1 ;;, {1, 3}]]},
    Joined → True,
    Frame → {{True, False}, {True, False}}, FrameLabel →
      {Text[Style["EGFR Fold Change", 16]], Text[Style["Steady-State Conc.", 18]]},
    PlotStyle → {Directive[Blue], Directive[Blue, Dashed], Directive[Blue],
      Directive[Red], Directive[Red, Dashed], Directive[Red]},
    PlotRange → {{0.5, 2.0}, {0, 3.5}}, FrameStyle → Directive[14],
    FrameTicks → {{0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0}, {0, 1, 2, 3}},
    Graphics[{{
      Text[Style["EGF", Blue, 14], {1.9, 2.85}],
      Text[Style["TGFβ3", Red, 14], {0.65, 2.75}]
    }}]

```

Out[299]= {100, 114}

Out[300]= {{1.24, 0.442141, 1.91213}, {1.24, 0.531779, 1.58376}}

Out[301]= {{1.11, 1.51306, 0.631773}, {1.11, 1.77612, 0.53973}}



```

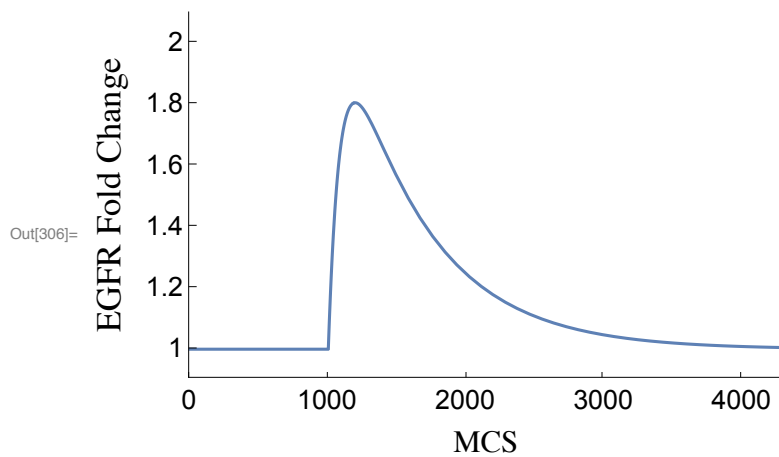
In[303]:= (* form for a transient perturbation of foldChange *)
f = 1 + UnitStep[t - t0] * ΔfMax * (1 - Exp[-(t - t0) / τUp]) * Exp[-(t - t0) / τDown]
tDependenceForFoldChangeSubList =
  {ΔfMax → If[useSwitchA, 1.3, 1.0], t0 → 1000, τUp → 100, τDown → 600}
FindMaximum[f /. tDependenceForFoldChangeSubList, {t, 1100}]
Plot[f /. tDependenceForFoldChangeSubList, {t, 0, 4300},
  PlotRange → {{0, 4300}, {0.9, 2.1}}, Frame → {{True, False}, {True, False}},
  FrameLabel → {Text[Style["MCS", 16]], Text[Style["EGFR Fold Change", 18]]},
  FrameTicks -> {{0, 1000, 2000, 3000, 4000}, {1, 1.2, 1.4, 1.6, 1.8, 2}},
  FrameStyle → Directive[14]]

```

Out[303]= $1 + e^{\frac{-t+t_0}{\tau_{\text{Down}}}} \left(1 - e^{\frac{-t+t_0}{\tau_{\text{Up}}}}\right) \Delta f_{\text{Max}} \text{UnitStep}[t - t_0]$

Out[304]= {ΔfMax → 1.3, t0 → 1000, τUp → 100, τDown → 600}

Out[305]= {1.80565, {t → 1194.59}}




```

In[307]:= EGF = .
          TGF = .
          (* EGF[0] = .
             TGF[0] = . *)
          tDependentSubList =
            {EGF → EGF[t], TGF → TGF[t], foldChange → f /. tDependenceForFoldChangeSubList}
          EGF'[t] == ((vEform - vEdeg) /. tDependentSubList);
          TGF'[t] == ((vTform - vTdeg) /. tDependentSubList);
          solutions = NDSolve[{
            EGF'[t] == ((vEform - vEdeg) /. tDependentSubList),
            TGF'[t] == ((vTform - vTdeg) /. tDependentSubList),
            EGF[0] == 0.001, TGF[0] == 0.001
          }, {EGF, TGF}, {t, 0, 6000}]
          Plot[{EGF[t] /. solutions[[1]], TGF[t] /. solutions[[1]]}, {t, 0, 6000},
            PlotStyle → {Blue, Red}, Frame → {{True, False}, {True, False}},
            FrameLabel → {"t (mcs)", "TGF (RED) or EGF (BLUE)"}, PlotRange → {All, {0, 3.8}}]

```

```

Out[309]= {EGF → EGF[t], TGF → TGF[t], foldChange → 1 + 1.3 e $\frac{1000-t}{600}$  (1 - e $\frac{1000-t}{100}$ ) UnitStep[-1000 + t]}

```

```

Out[312]= {{EGF → InterpolatingFunction[
  Domain: {{0., 6.00×103}}
  Output scalar
],
  TGF → InterpolatingFunction[
  Domain: {{0., 6.00×103}}
  Output scalar
]}}

```

