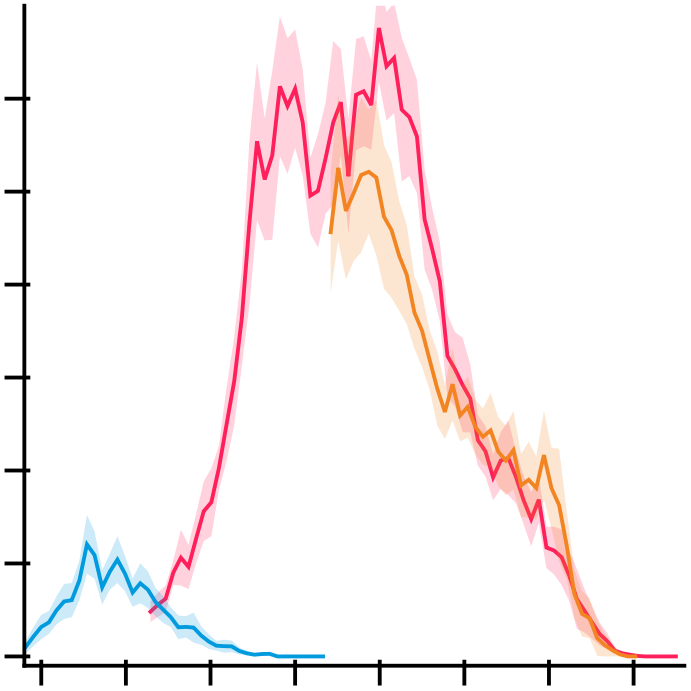
```
(*********************************************)
(*******Generate plot in Figure S7B, Left****************)
(*********************************************)

(***From Ai9 injections***)

v1Color = RGBColor["#ff1f5b"];

lpColor = RGBColor["#009ade"];

lmColor = RGBColor["#f28522"];

mouseList = {"Mouse21196", "Mouse21180", "Mouse22447", "Mouse21185", "Mouse21137",
    "Mouse21200", "Mouse22448", "Mouse21177", "Mouse21197", "Mouse22439"};

normCellCountsV1 = Table[ToExpression /@ Import[
      StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/Ai9/", mouseList[[n]], "/",
       mouseList[[n]], "_RH_V1_NormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];

normCellCountsLP = Table[ToExpression /@ Import[
      StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/Ai9/", mouseList[[n]], "/",
       mouseList[[n]], "_RH_LP_NormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];

normCellCountsLM = Table[ToExpression /@ Import[
      StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/Ai9/", mouseList[[n]], "/",
       mouseList[[n]], "_RH_LM_NormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];

(***)

xValsV1 = Mean[normCellCountsV1][[All, 1]];

meanNormCellCountsV1 = Mean[normCellCountsV1][[All, 2]];

semNormCellCountsV1 =
  StandardDeviation[normCellCountsV1][[All, 2]] / Sqrt[Length[mouseList]];

g1 = ListLinePlot[{Partition[Riffle[xValsV1, meanNormCellCountsV1], 2],
    Partition[Riffle[xValsV1, (meanNormCellCountsV1 + semNormCellCountsV1)], 2],
    Partition[Riffle[xValsV1, (meanNormCellCountsV1 - semNormCellCountsV1)], 2]},
   PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
   Filling → {1 → {{2}, Directive[Opacity[0.2], v1Color]},
     1 → {{3}, Directive[Opacity[0.2], v1Color]}},
   PlotStyle → {{v1Color, Thick}, Transparent, Transparent}, Joined → True, FrameTicks →
    {{LinTicks[0, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
     {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
   Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
   FrameStyle → Thick, AspectRatio → 1,
   FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

(***)

xValsLP = Mean[normCellCountsLP][[All, 1]];

meanNormCellCountsLP = Mean[normCellCountsLP][[All, 2]];

semNormCellCountsLP =
  StandardDeviation[normCellCountsLP][[All, 2]] / Sqrt[Length[mouseList]];
```

```
In[•]:= g2 = ListLinePlot[{Partition[Riffle[xValsLP, meanNormCellCountsLP], 2],
     Partition[Riffle[xValsLP, (meanNormCellCountsLP + semNormCellCountsLP)], 2],
     Partition[Riffle[xValsLP, (meanNormCellCountsLP - semNormCellCountsLP)], 2]},
    PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
    Filling → {1 → {{2}, Directive[Opacity[0.2], lpColor]},
      1 → {{3}, Directive[Opacity[0.2], lpColor]}},
    PlotStyle → {{lpColor, Thick}, Transparent, Transparent}, Joined → True, FrameTicks →
     {{LinTicks[0, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
      {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
    Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
    FrameStyle → Thick, AspectRatio → 1,
    FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

In[•]:= (***)

In[•]:= xValsLM = Mean[normCellCountsLM][[All, 1]];

In[•]:= meanNormCellCountsLM = Mean[normCellCountsLM][[All, 2]];

In[•]:= semNormCellCountsLM =
      StandardDeviation[normCellCountsLM][[All, 2]] / Sqrt[Length[mouseList]];

In[•]:= g3 = ListLinePlot[{Partition[Riffle[xValsLM, meanNormCellCountsLM], 2],
     Partition[Riffle[xValsLM, (meanNormCellCountsLM + semNormCellCountsLM)], 2],
     Partition[Riffle[xValsLM, (meanNormCellCountsLM - semNormCellCountsLM)], 2]},
    PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
    Filling → {1 → {{2}, Directive[Opacity[0.2], lmColor]},
      1 → {{3}, Directive[Opacity[0.2], lmColor]}},
    PlotStyle → {{lmColor, Thick}, Transparent, Transparent}, Joined → True, FrameTicks →
     {{LinTicks[-0.1, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
      {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
    Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
    FrameStyle → Thick, AspectRatio → 1,
    FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];
```

In[•]:=
```
Show[g1, g2, g3]
```

Out[•]=



```
(*********************************************)
(*******Generate plot in Figure S7B, Right****************)
(*********************************************)

(***From eOPN3 injections***)
```

In[•]:=
```
mouseList = {"Mouse493", "Mouse494", "Mouse500"};
```

In[•]:=
```
normCellCountsV1 = Table[ToExpression /@
     Import[StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/eOPN3/", mouseList[[n]],
       "/", mouseList[[n]], "_V1NormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];
```

In[•]:=
```
normCellCountsLP = Table[ToExpression /@
     Import[StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/eOPN3/", mouseList[[n]],
       "/", mouseList[[n]], "_LPNormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];
```

In[•]:=
```
normCellCountsLM = Table[ToExpression /@
     Import[StringJoin["F:/FigureGeneration/FigureS7/FigS7Data/eOPN3/", mouseList[[n]],
       "/", mouseList[[n]], "_LMNormCellCounts.txt"], "List"], {n, 1, Length[mouseList]}];
```

In[•]:=
```
(***)
```

In[•]:=
```
xValsV1 = Mean[normCellCountsV1][[All, 1]];
```

In[•]:=
```
meanNormCellCountsV1 = Mean[normCellCountsV1][[All, 2]];
```

In[•]:=
```
semNormCellCountsV1 =
  StandardDeviation[normCellCountsV1][[All, 2]] / Sqrt[Length[mouseList]];
```

```
In[•]:= g1 = ListLinePlot[{Partition[Riffle[xValsV1, meanNormCellCountsV1], 2],
     Partition[Riffle[xValsV1, (meanNormCellCountsV1 + semNormCellCountsV1)], 2],
     Partition[Riffle[xValsV1, (meanNormCellCountsV1 - semNormCellCountsV1)], 2]},
    PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
    Filling → {1 → {{2}, Directive[Opacity[0.2], v1Color]},
      1 → {{3}, Directive[Opacity[0.2], v1Color]}},
    PlotStyle → {{v1Color, Thick, Dashed}, Transparent, Transparent},
    Joined → True, FrameTicks →
     {{LinTicks[0, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
      {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
    Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
    FrameStyle → Thick, AspectRatio → 1,
    FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

In[•]:= (***)

In[•]:= xValsLP = Mean[normCellCountsLP][[All, 1]];

In[•]:= meanNormCellCountsLP = Mean[normCellCountsLP][[All, 2]];

In[•]:= semNormCellCountsLP =
   StandardDeviation[normCellCountsLP][[All, 2]] / Sqrt[Length[mouseList]];

In[•]:= g2 = ListLinePlot[{Partition[Riffle[xValsLP, meanNormCellCountsLP], 2],
     Partition[Riffle[xValsLP, (meanNormCellCountsLP + semNormCellCountsLP)], 2],
     Partition[Riffle[xValsLP, (meanNormCellCountsLP - semNormCellCountsLP)], 2]},
    PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
    Filling → {1 → {{2}, Directive[Opacity[0.2], lpColor]},
      1 → {{3}, Directive[Opacity[0.2], lpColor]}},
    PlotStyle → {{lpColor, Thick, Dashed}, Transparent, Transparent},
    Joined → True, FrameTicks →
     {{LinTicks[0, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
      {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
    Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
    FrameStyle → Thick, AspectRatio → 1,
    FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

In[•]:= (***)

In[•]:= xValsLM = Mean[normCellCountsLM][[All, 1]];

In[•]:= meanNormCellCountsLM = Mean[normCellCountsLM][[All, 2]];

In[•]:= semNormCellCountsLM =
   StandardDeviation[normCellCountsLM][[All, 2]] / Sqrt[Length[mouseList]];
```

In[ ]:=
```
g3 = ListLinePlot[{Partition[Riffle[xValsLM, meanNormCellCountsLM], 2],
    Partition[Riffle[xValsLM, (meanNormCellCountsLM + semNormCellCountsLM)], 2],
    Partition[Riffle[xValsLM, (meanNormCellCountsLM - semNormCellCountsLM)], 2]},
  PlotRange → {{1.4, 5.3}, {-0.01, 0.7}},
  Filling → {1 → {{2}, Directive[Opacity[0.2], lmColor]},
    1 → {{3}, Directive[Opacity[0.2], lmColor]}},
  PlotStyle → {{lmColor, Thick, Dashed}, Transparent, Transparent},
  Joined → True, FrameTicks →
   {{LinTicks[-0.1, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[1.4, 5.3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
  Frame → {{True, None}, {True, None}}, Axes → False, TicksStyle → Thick,
  FrameStyle → Thick, AspectRatio → 1,
  FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];
```

In[ ]:=
```
Show[g1, g2, g3]
```

Out[ ]=