See powerpoint PDF for background information

Place to get code for activity - run R in jupyter notebook:

https://mybinder.org/v2/gh/jennifer-bio/SIR_workshop/HEAD
https://rnotebook.io/anon/ea9dafdf646c3cc6/notebooks/Welcome-CopyXXX.ipynb

Replace XXX with number - raise hand when asked to get a number

If you do not want to code but explore parameters:

https://alhill.shinyapps.io/COVID19seir/

Combination of makes ***Set transmission rates…*** makes up beta

Combination of ***Set clinical parameters…*** makes gamma

Download code for future: your current work,

https://github.com/jennifer-bio/SIR_workshop

Interesting things to learn and some places to go after conference to continue learning:

Background knowledge related to this activity

- SIR model
  - Adding compartments https://towardsdatascience.com/infectious-disease-modelling-beyond-thebasic-sir-model-216369c584c4
  - Pre made R starting code https://cran.r-project.org/web/packages/shinySIR/vignettes/Vignette.html
- Cell biology
- Viruses in people
  - Short article https://www.thepartnershipineducation.com/resources/immune-system
  - Full course https://www.edx.org/course/viruses-how-to-beat-them-cells-immunity-vacc ines

Technical skills - shares skills with data science

- Computer ideas/introductory algorithms practice - drag and drop scratch https://scratch.mit.edu/
- Computer coding - python and R
  - https://www.codecademy.com/
  - https://www.dataquest.io
  - Edx - a few course examples I have not looked into
    - https://www.edx.org/course/programming-for-everybody-getting-started-with-pyt
    - https://www.edx.org/course/python-basics-for-data-science
  - Partial course available online for introduction to python: https://www.cs.hmc.edu/twiki/bin/view/CS5 and with biology motivated problems: https://www.cs.hmc.edu/twiki/bin/view/CS5Green (textbook completes the information)
- Statistics