Instructions:

1. Download common\_core8.csv and Mucus\_Code.R from Codes\_and\_data folder.
2. Download all the packages listed in Rstudio\_package\_list from Codes\_and\_data folder.
3. Run Mucus\_Code.R in the same directory as common\_core8.csv (This code was found to have issues with some computers running Windows OS, specifically with points not popping up on the plots).
4. Locate “Figure\_S2\_Mucus\_Source.pdf”.
5. From folder Mucus\_soruce, locate “Figure\_S2\_Mucus\_Source.svg” in the folder. Add number of data points in inkscape.
6. From the folder locate “Figure\_S2\_Mucus\_source”, locate “Figure\_S2\_Mucus\_source\_’(a-f)’\_data.csv”. These are data files that make up panel **a-f** of “Figure\_S2\_Mucus\_Source.pdf”. First row is the header. Each data file a-f contains information on their respective panel: Effective diffusion, anomalous exponent, Size, Charge, Temperature, and pH, respectively. Columns refer to Mucus source: “Human\_cervix” is mucus from human cervix, “Hydrogel” is artificial hydrogel, “Pig\_stomach” is mucus from pig’s stomach, “Human\_lung” is mucus from human lung, and “Pig\_intestine” is mucus from pig’s intestines.

Output(s):

“Figure\_S2\_Mucus\_Source.pdf” is a pdf of box plots effective diffusion, anomalous exponent, particle size, charge, temperature and pH based on mucus source (mucus originating from certain tissue).