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 for some computers running Windows OS; specifically, points do not show in plots in some outputs).
4. Locate “Figure\_S1\_diffusion\_scaled\_by\_size\_a.pdf”.
5. From the folder, locate “Figure\_S1\_diffusion\_scaled\_by\_size\_a”. Locate “Figure\_S1\_diffusion\_scaled\_by\_size\_data\_a.csv”. This data file creates “Figure\_S1\_diffusion\_scaled\_by\_size\_a.pdf”. The first row is the header. The file contains information on the size of the particle (Diameter), its effective diffusion measurement (Diffusion\_constant), and its particle type (Particle\_type).

Output(s):

“Figure\_S1\_diffusion\_scaled\_by\_size\_a.pdf” is a pdf of a scatter plot of the effective diffusion scaled by particle size versus particle size with different shapes corresponding to particle type.