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 showing in plots).
4. Locate "Figure_S1_Particle_Type.pdf".
5. In folder Particle_type, locate "Figure_S1_Particle_Type.svg". Add number of data points in inkscape.
6. From the folder locate "Figure_S1_Particle_type", locate "Figure_S1_Particle_type_'(a-f)'_data.csv". These are data files that make up panel **a-f** of "Figure_S1_Particle_Type.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 Particle type: "Antibodies_and_proteins" is antibodies and proteins, "Virus" is virus, "PEG" is Pegylated particles, "Anime" is anime-terminated particles, "COOH" is Carboxylated-terminated particles and "Chitosan" is Chitosan terminated particles.

Output(s):

"Figure_S1_Particle_Type.pdf" is a pdf of box plots effective diffusion, anomalous exponent, particle size, charge, temperature and pH based on particle type. Variables were ordered based on the medium of diffusion.