**Research Questions:**

Overarching: Does prior exposure induce heterogeneity in traits relevant to disease transmission and pathology? We know that it induces heterogeneity in susceptibility, but what about other phenotypes?

Q1: Does prior exposure induce heterogeneity in eye scores upon reinfection?

Q2: Does prior exposure induce heterogeneity in pathogen loads upon reinfection?

Q3: Does prior exposure induce heterogeneity in immune responses just prior to reinfection?

Q3.1: Does this variation predict susceptibility to reinfection (i.e., is the variation in antibody levels induced by prior exposure a potential mechanism of what we see for susceptibility?)

Q4: How do all these measures (possibly including susceptibility?) differ by sex?

Datasets:

* *We need to remove the birds that were removed from the Expmt 1A paper!* Conservatively remove these birds because some may have not/or were not recovered before secondary infection
  + 2274, 2514, 2469, 2520, 2494, 2505
* There are a couple of questionable birds that we need to consider how to accommodate:
  + 2451: During primary this bird had up to a 2.5 eyescore but no path load. However, it did have high antibodies. This could be that we missed the path load because we only have swab data for PID7. *I would like to consider this bird infected*
  + 2398, 2451, 2470, 2515: Seropositive but qPCR negative upon secondary – possibly super resistant? 2398, 2470 did not get eyescore
    - *I don’t think this is indicative of an error of any kind. Most of these birds received high doses in primary (some were low) and then all but 2515 received a very low dose of 30 on secondary. So this just seems like a variable response to that secondary infection and is cool data!*
  + 2375: Missing ab data for this bird for PID 41 – did not get enough plasma
    - *We will just need to remove this bird for certain analyses, I guess*

