Executive Summary
Cyno Bloody Nose Syndrome

Background:
A concern was reported via email to the AV, IACUC chair, ACUP Director and several faculty regarding presentation of bloody noses and sneezing in cynomolgus macaques housed in [redacted]. Sneezing and bloody noses can be caused by a number of conditions including low humidity in the environment, but also by the organism Moraxella catarrhalis. Moraxella is an opportunistic organism endemic to cynomolgus macaques. Antibiotic therapy is often reserved for use in persistent or severe cases as the infection is typically self-limiting and there is concern for the overuse of antibiotic therapies and the stimulation of growth by resistant organisms.

Cases referenced in the concern:
The clinical veterinarian and veterinary technicians were monitoring the animals reported for sneezing and reviewing entries on the daily observation sheets and in [redacted]. Entries on the DOS were recorded on 3/13 and 3/14 but were not recorded for the following two days. Entries on the original animals that presented the condition were recorded on 3/17 and 3/18. When reviewed in conjunction with records in [redacted], evidence of persistence was lacking for the originally observed animals.

Several days later records indicated additional animals were observed sneezing with bloody noses. Antibiotic therapy for cases that persisted to day three was initiated on 3/19. Animals in the room were cultured for the presence of the bacterium and several animals were started on an antibiotic regimen based on previously known susceptibility of the organism to the prescribed drugs. Animals placed on antibiotics responded favorably to the treatment. Order of entry into rooms was changed on 3/19 such that this room was entered last. The infection was contained to [redacted].

The infection spread to some Rhesus macaques housed in the same room and assigned to a terminal trial. The R. macaques had been recently exposed to Zika virus during the same period of time and were destined to necropsy within a week or two.

In addition to the obvious spread of the organism through sneezing in the room, there was evidence of dried blood located on the door, the supply cart, and the feed scoop. The observation of these sanitation deficiencies were not reported to the husbandry supervisors at the time. Upon learning of the deficiencies, the husbandry staff immediately corrected the situation and addressed the deficiencies with staff.

Conclusions
1) The daily observation sheets were not consistently annotated which led to a breakdown in communication between those who first observed the condition and the veterinarians reviewing the cases.
2) There was good communication between the IDR veterinarian working daily with the animals and the DCM veterinarian overseeing the cases.
3) Based upon available information, the DCM veterinarian used appropriate professional judgement to determine when to initiate antibiotic treatments.

4) There was a lack of communication between the staff who observed inadequate husbandry in the room and the members/supervisors of the husbandry crews. As soon as the deficiencies were made known, husbandry supervisors addressed the issues. Staff have been reminded of the importance of cleanliness, they have been retrained, and the supervisor has been monitoring the rooms daily. While sanitation of equipment in the room needed improvement, the containment of the organism to the single room was effective, indicating appropriate procedures are in place to avoid widespread contamination.
5) Animals responded to the antibiotic regimen and do not continue to exhibit signs of the infection.

Recommendation to the IO

The recommendation to the IO is that this issue does not elevate to the level requiring a report to OLAW. There is no evidence of a serious or recurring non-compliance with approved IACUC protocols.

# Redaction Log

| Reason | Page (# of occurrences) | Description |
|---|---|---|
| ORS 192.345(30) OHSU Medical Researcher | **1** (4) | OHSU faculty and employee animal worker exemption. |